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APPRAISAL OF THE

KYONGJU TOURISM PROJECT

KOREA

November 21, 1973

Tourism Projects Department

CURRENCY EQUIVALENTS

Currency Unit	=	Won (W)
US$ 1.00	=	Won 400
1 Won	=	.0025 US$
1 Billion Won	=	2.5 Million US$
1 Million US$	=	400 Million Won

WEIGHTS AND MEASURES EQUIVALENTS

1 meter (m)	= 3.28 feet	1 kilovolt (kV)	= 1,000 volts
1 square meter (m^2)	= 10.76 square feet	1 megawatt (MW)	= 1,000 kilowatts
1 kilogram (kg)	= 2.205 pounds	1 megavolt ampere (MVA)	= 1,000 kilovolt-ampere
1 metric ton (m ton)	= 2,205 pounds	1 gigawatthour (Gwh)	= 1 million kilowatt hours (kwh)
1 hectare (ha)	= 2.47 acres		
1 kilometer (km)	= 0.62 miles		

1 liter per second (l/sec) = 22,800 US gallons per day
1 cubic meter per day (m^3/d) = 264 gallons per day

ACRONYMS AND ABBREVIATIONS

ADC	-	Agriculture Development Corporation
EPB	-	Economic Planning Board
ILO	-	International Labor Office
KCG	-	Kyongju City Government
KDO	-	Kyongju Development Office
KECC	-	Korea Engineering Consultants Corporation
KECO	-	Korean Electric Company
KTA	-	Kyongju Tourism Agency
MAF	-	Ministry of Agriculture and Fishery
MC	-	Ministry of Communications
MOC	-	Ministry of Construction
ME	-	Ministry of Education
NACF	-	National Agricultural Cooperative Federation
ORD	-	Office of Rural Development
OSROK	-	Office of Supply of the Republic of Korea
UNDP	-	United Nations Development Program
WSD	-	Water and Sewerage Division of Kyongju City Government

FISCAL YEAR

January 1 - December 31

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KOREA

APPRAISAL OF THE KYONGJU TOURISM PROJECT

SUMMARY

i. This report appraises a project to provide the infrastructure required for a new tourism complex near the City of Kyongju. In its first stage covering a period of 10 years, the Bomun Lake resort would be developed for 3000 hotel rooms. The project includes provision of water and sewerage systems for the resort area and the City of Kyongju, construction of a multipurpose dam and a small irrigation system, provision of electricity and telecommunication facilities for the resort area, construction and/or re-alignment of access roads to historical sites and provision of training facilities for hotel personnel.

ii. The number of foreign visitors to Korea has increased on average by 33% annually between 1966 and 1972, the rate of growth accelerating in the later years. This has been mainly due to the great increase in foreign vacation travel of the Japanese, who constitute the major part of all visitors to Korea. Foreign exchange earnings from tourism are still small (US$75 million in 1972, about 4.6% of the total value of commodity exports), but a major increase of these earnings should be possible in the next decade.

iii. The principal destinations of foreign visitors to Korea have been Seoul and Busan, because of limited accommodation in other parts of the country. To meet the prospective growth of tourism demand, the Korean authorities selected the area surrounding the City of Kyongju as the priority area for national and international tourism development. Kyongju, the capital for one thousand years of the prosperous Silla dynasty, is one of the best known historical cities in northeast Asia, characterized by magnificent cultural remains. Because of its historical and cultural importance, Kyongju has been a center for domestic tourism for many years (there were more than 1.5 million domestic visitors in 1972) but the number of foreign visitors, although increasing rapidly, is still small (only 76,000 in 1972). This does not reflect lack of interest on the part of foreign visitors, but the lack of hotel accommodation. A Master Plan for the development of the Kyongju area has been under implementation since 1971 and much has already been achieved. As part of this plan, a site has been selected outside the City of Kyongju, on Bomun Lake, to provide for the expansion of suitable accommodation for foreign visitors in an attractive setting.

iv. The site of 1,040 hectares is ample for development of the resort, including necessary ancillary facilities such as a shopping center and traditional Korean-style restaurants and recreational amenities (sports grounds, marina and a golf course). The development of the new resort would also make possible the provision of certain improvements to the City of Kyongju and the existing villages close to Bomun Lake. These improvements

include expansion of the water supply system and the provision of a sewerage and solid waste disposal system for the City of Kyongju, and the provision of rural water supply, environmental sanitation, electricity and streets for five existing villages, plus the construction, furnishing and equipment of an elementary school for the villages. Because of the major infrastructure investments in the project area, the incremental costs of the village improvements are relatively small. A multi-purpose dam would be built to control flooding, stabilize the water level in Bomun Lake, and supply water for the resort area, the City of Kyongju and the villages and for a small irrigation project.

v. The estimated total project cost is US$50 million, with an estimated foreign exchange component of US$21.0 million, or 42% of the total. Proposed Bank financing of US$25.0 million would cover the foreign exchange component and provide US$4.0 million for local cost financing.

vi. Major civil works contracts would be awarded following international competitive bidding in accordance with Bank guidelines. If major civil works contracts were to be won by foreign bidders, the foreign exchange component for civil works contracts would be about US$9.1 million. It is estimated that about US$5.5 million in direct foreign exchange would be required for purchase of equipment, materials and supplies, and for foreign consultants. With the exception of consultants, all these items would be procured through international competitive bidding.

vii. Responsibility for constructing the project would rest with five Government agencies. The Agricultural Development Corporation (ADC) would build the Duck-Dong Dam and the related irrigation works. The Kyongju City Government (KCG) would be responsible for construction of water supply, sewerage and solid waste disposal systems of both the City itself and the Bomun Lake resort. The Korean Electric Company (KECO) would construct and operate the electricity facilities of the project. The Ministry of Communications (MC) would install and operate the telecommunications facilities. The Kyongju Development Office (KDO) would be responsible for implementation of all the remaining infrastructure works included in the project. After construction, KCG would operate and maintain the dam, the water, sewerage and waste disposal systems, and all project roads; ADC and the Farmers Land Improvement Association (FLIA), or another organization acceptable to the Bank, would operate and maintain the irrigation works; and a new entity, the Kyongju Tourism Agency (KTA), would operate and maintain all public areas within the resort and would lease and/or sell sites and facilities to private investors. The KTA would be established not later than January 1, 1975; its structure and policies would be subject to Bank approval. Overall coordination of the project would be provided by the Secretariat for Economic Affairs in the Office of the President of the Republic. The Bank would enter into project agreements with ADC, KCG and KECO.

viii. The justification for the proposed investment in infrastructure and buildings is the expectation that it will be able to attract relatively

large numbers of foreign visitors over the 25 years of the project's economic life, and that private investors and hotel companies will be prepared to build hotels and other tourism facilities there. When fully operational in 1984, the project would provide employment for about 5,400 workers in the hotels and 1,500 in other facilities of the resort. Indirect employment may amount to 10-15,000 persons. The economic rate of return is estimated at 18.5%. Net foreign exchange earnings are estimated at US$8.1 million in 1976 and US$66.4 million per annum by 1984, when all of the 3,000 rooms are expected to be in full operation.

ix. It is proposed that the Bank's loan should cover half of total project costs. The balance would be provided mainly through budgetary allocations. It is also proposed that the investment in tourism facilities should be recovered by the investing agencies over the economic life of the project together with a reasonable rate of return. Charges for utilities should yield a reasonable return on net fixed assets in operation and ensure financial viability through the maintenance of a satisfactory debt service coverage. Charges for irrigation water would be in line with charges levied in other Bank-supported irrigation projects in Korea.

x. The project is suitable for a Bank loan of US$25.0 million equivalent for a term of 25 years, including a grace period of seven years. The loan would be made to the Republic of Korea.

KOREA

APPRAISAL OF THE KYONGJU TOURISM PROJECT

1. INTRODUCTION

1.01 In 1971 the Government of Korea requested Bank assistance in the development of tourism. A tourism sector review and project identification mission visited Korea in May 1971 and concluded that the Kyongju area (some 400 km to the southeast of Seoul) offered the most promising prospects for attracting greater numbers of visitors to Korea and inducing a longer stay per visitor. An important aspect of the Kyongju area's potential is its cultural and historic attraction for, and close proximity to, the rapidly growing Japanese market. The Government was already engaged in the preparation of a Master Plan for the urban and touristic development of Kyongju, on the basis of which it was possible for the Korean authorities, assisted by Bank preparation missions, to formulate a tourism project suitable for Bank consideration.

1.02 The project would provide infrastructure (roads, water supply, sewerage, electricity, telecommunications) for development of an international tourist resort designed for 3,000 hotel rooms, plus related infrastructure improvements in near-by areas, and facilities for training of hotel personnel. The project also includes a multipurpose dam and a small irrigation project.

1.03 Due to its complexity, the project was about two years in preparation by the Korean Government and its consultants. For the same reason, an unusual number of Bank staff were involved in its evaluation. The appraisal mission, consisting of Messrs. Vera (Chief of Mission), Calkins, El Maaroufi, Hechtenberg, Jacob, Iizuka, Krippl and Saravanapavan, completed its field work in April 1973. The dam and irrigation components were evaluated by an earlier mission comprising Messrs. Golan and Scherich (Consultant). Legal aspects were reviewed in the field by Mr. Amerasinghe, and desk evaluations of electricity and telecommunications were made by Messrs. Maeda and Sathar.

1.04 This would be the first Bank loan for tourism in Korea.

2. BACKGROUND

A. The Economy

2.01 Korea has achieved an exceptional expansion in most sectors of economic activity since the mid-1960's. During the Second Five-Year Plan (1967-71), real GNP increased at an annual average compound rate of 11.5 percent. The major factors responsible for rapid growth during this period were a high level of investment and an extremely rapid rise in exports.

During 1971-72, a levelling off of exports and stagnation of investment caused a decrease in the rate of growth of GNP. However, a revival in the growth of exports and fixed investment has caused a sharp revival in the economy. GNP which increased at 7.1 percent in 1972 has been expanding at the rate of 14-15 percent in 1973.

2.02 Korea has been faced with the problems of financing rapid growth. This has caused it to rely heavily on foreign inflows of capital and has also led to domestic inflationary pressures. In both these respects, there have been improvements during the last year. The Government's stabilization efforts, particularly the measures taken in August 1972 to stop inflation and to moderate the disruptive impact of the slowdown on Korea's industrial sector, seem to be working successfully to bring about a more favorable environment for stable growth. Two parallel goals are to strengthen the industrial structure and to correct urban/rural income disparities through increased agricultural development.

2.03 The Government plans to pursue vigorously its long term targets of a per capita income of $1,000 and exports of $10 billion by the early 1980's. Substantial foreign borrowing would be needed to meet the resource requirements of the plan; in view of the expected rapid growth in exports, it appears likely that Korea could support the debt service requirements of such a borrowing program.

2.04 The Kyongju Tourism Project will contribute towards the Government's goals in several areas. Among these are rural development through the dam and irrigation component of the project, increased employment and incomes in the Kyongju area, which is among the poorer parts of the country, and significant increases in net foreign exchange earnings on services account.

B. The Tourism Sector

2.05 Korea's major tourist assets are its many sites of historical and archaeological significance, its scenic beauty, and its proximity to a major tourist-generating market, Japan, with which it has cultural, historical and increasing economic ties (Annex II).

2.06 Despite these advantages, tourist traffic to Korea was very small until recent years. Korea was not on established travel routes for European and American vacationists visiting the Far East or on Pacific tours. Until the last few years its facilities for foreign visitors were very limited with only a few hotels of international standard in the capital, Seoul. Little had been done to develop the country's cultural and historical attractions for the foreign visitor, and international transport links were not well developed. Visitor numbers were few, averaging only 42,000 annually in the mid-1960's. About one-half of all foreign visitors in those years were Americans, many of whom were on business or official duty. Among non-American visitors,

Koreans resident in Japan who were visiting their families in Korea accounted for a large proportion. There was little real vacation traffic.

2.07 This situation was dramatically altered with the great increase in foreign vacation travel of the Japanese over the past several years. Total foreign visits by Japanese to all destinations increased from 212,000 in 1966 to 1.4 million in 1972 and most of this increase was in vacation travel. A growing share of this total has gone to Korea (from 8% in 1966 to 16% in 1972).

2.08 Foreign visitor arrivals in Korea increased on average by 33% annually between 1966 and 1972, and the rate of growth accelerated in the later years. Arrivals jumped by nearly 60% in 1972, and the number of Japanese visitors in that year was more than double the level of 1971. Growth trends are shown in Annex II and summarized in the table below:

Visitors to Korea by Nationality - 1966, 1971 and 1972

Nationality	1966		1971		1972		Av. Annual Growth Rate 1966-1972
U.S.A.	30,226	(44%)	58,003	(25%)	63,758	(17%)	15%
Japan	16,873	(25%)	96,531	(41%)	217,287	(59%)	56%
Koreans Resident in Japan	12,005	(18%)	50,350	(22%)	55,280	(15%)	29%
Others	8,861	(13%)	27,911	(12%)	34,511	(9%)	26%
TOTAL	67,965	(100%)	232,795	(100%)	370,836	(100%)	33%
Index 1966 = 100)		100		343		545	

Source: Ministry of Transportation, Bureau of Tourism.

2.09 Japan now constitutes the major source of all visitors to Korea (almost 60%). The very rapid increase in foreign travel by Japanese reflects the growing economic prosperity of Japan, the continued liberalization of overseas travel restrictions since 1964 and the recent realignments of

foreign exchange rates. The recent improvement in communications between Korea and Japan has been a factor in enabling more of the estimated 500,000 Koreans resident in Japan to visit their homeland.

2.10 Both the private sector and the Government have responded to the opportunities offered by the growth of the Japanese travel market. Hotel capacity in certified hotels 1/ has increased by 40% in the last two years, from 4,500 rooms in April 1971 to 6,300 rooms in the Spring of 1973. As the foreign visitor flow is rather even throughout the year, with low points only in the winter months of January and February, the hotels maintain high annual occupancies. With the fast growth of tourist traffic, investment in new accommodation capacity offers attractive financial returns (para. 4.10). Some 5,000 additional hotel rooms are planned to be built during the next two years, principally in Seoul and Busan, the main entry points for foreign visitors. These new hotels will be financed primarily by private investors.

2.11 To keep pace with the growing number of visitors, most of whom arrive by air (91.4% in 1972), air services of both the Korean national airline and foreign airlines have expanded rapidly with the number of international flights increasing from 2,300 in 1966 to 11,440 in 1972. Seoul's Kimpo International Airport is currently being expanded to accommodate jumbo jets, and the relocation of Busan's existing airport to an area which will permit its expansion is under consideration. Busan is now linked with Shimonoseki (Japan) by a thrice-weekly ferry service; plans are in hand to increase the frequency of this service and to develop new sea charter services between Japan and Korea.

2.12 With the prospects for continued rapid growth in Japanese foreign travel and with the aim of attracting a greater share of this market to Korea, the Government has taken a number of measures to promote the development of the tourist industry. Recognizing that the ancient former capital of the country at Kyongju could become a major point of interest for foreign visitors, the Government organized the preparation of a development plan for that area. It is currently preparing, with USAID assistance, a comprehensive national tourism study to establish the framework for the longer-term development of the sector. In addition, it is promoting the preparation of a Master Plan for the development of Cheju Island, which has major tourist assets and is considered an area of high priority for tourism development. The Government has established an Industrial Rationalization Fund for Tourism with assets of W 2.6 billion (US$6.5 million) which will make medium-term loans available to private investors for improving existing hotels and other tourist facilities or building new ones. The Government provides incentives to hotel investors in the form of customs duty exemption on imported materials and a tax holiday on corporate income in the first five years of operation. With assistance from UNDP and ILO, the Government is promoting a tourism training program to expand the output of qualified personnel for the industry.

1/ The Bureau of Tourism issues a certificate to hotels which it considers meet the standards required by foreign visitors.

2.13 The main responsibility at the Government level for the sector rests with the Bureau of Tourism, a department of the Ministry of Transportation. The Bureau's staff has until recently been small and it has lacked the authority and resources to push through a major development program. Hence, in 1972, a special section was set up in the Office of the President of the Republic to provide greater impetus to and more effective coordination of the efforts of government agencies in developing tourism.

2.14 Though tourism in Korea is at an early stage, and its contribution to foreign exchange earnings is still relatively small (US$16.2 million in 1966 and US$75 million in 1972 or 4.6% of the value of commodity exports), a major increase in the number of foreign visitors to Korea and in foreign exchange earnings derived from tourism should be possible in the next decade. Because of its proximity to Japan, its comparatively low price level and its cultural and historical remains which are of particular interest to the Japanese, Korea should be able to attract a significant share of the growing Japanese foreign travel market. In addition, a greater proportion of Europeans and Americans who visit Japan in order to see Kyoto and Nara may be induced to go on from there to Korea.

3. THE PROJECT

A. Background

3.01 The city of Kyongju, located about 70 km to the north of Busan (Maps 1 and 2) was the capital of the Silla dynasty which ruled over the southeastern portion of the Korean peninsula from 58 B.C. to 668 A.D. and all of Korea from 668 A.D. to 935 A.D. At its height, Kyongju had close to a million inhabitants and, with its elaborate palaces and monasteries, was the country's major artistic and cultural center. The town is now rather small (100,000 inhabitants) and undistinguished, but many cultural, artistic and religious relics of the Silla period can be found there. On the edge of the town is a cluster of Silla and Yi dynasty remains: an observatory built in 634 A.D. which is the oldest of its kind in Asia, royal tombs and shrines, temples and pagodas. A short distance from Kyongju, on Mount Toham, is the Bulguk Temple, famous for its 25-foot golden Buddha dating back to the eighth century, and the Sokkuram Cave Temple with its exquisite stone Buddha and sculptured stone friezes. The Cave Temple is located at the top of Mount Toham with magnificent views of the surrounding hills and of the sea beyond. On the other side of the city is Mount Namsan where fifty-five temple sites, some thirty-eight stone pagodas and many royal tombs have been discovered.

3.02 With its historical and cultural importance, Kyongju has been a center for domestic tourism for many years. The city has attracted more than a million domestic visitors in each year since 1967; in 1972 they numbered 1.5 million. Many of the historic remains, despite their cultural

importance, were long neglected and fell into decay. In late 1970, however, as part of a national program of cultural renovation, the Government established an inter-ministerial planning group charged with the formulation of an overall plan for the restoration and preservation of the historic sites at Kyongju and for the city's urban and touristic development. The Kyongju Development Office (KDO) was set up and work began in 1971. Much has already been achieved. The largest and most famous temple (Bulguk) has been completely restored. Measures have been taken to preserve the Cave Temple and protect the royal tombs. A new museum is being built. Access to the sites has been greatly improved with new roads and expanded parking spaces. All of these steps have served further to enhance Kyongju's position as the country's pre-eminent cultural and historic center.

3.03 Though the prime motivation for the restoration and preservation work at Kyongju has been to foster the Koreans' interest in and knowledge of their culture and history, the Government realized that with suitable additional facilities the area could also become a center of attraction for foreign visitors. The number of foreign visitors to Kyongju, though increasing rapidly, is still small -- only 76,000 in 1972. This mainly reflects the lack of suitable accommodation, with only two hotels comprising 142 rooms (3-star category) presently certified by the Bureau of Tourism as suitable for foreign visitors.

3.04 To provide for the expansion of suitable accommodation in an attractive setting, the Korean authorities selected a site outside the city where there would be space for a large-scale resort, with a first stage of 3,000 hotel rooms. The site, covering about 1,000 ha, is located on an artificial lake (Bomun), 6.5 km from Kyongju City, in an area of great natural beauty. The area has a temperate climate, favorably influenced by a mountain range to the east of the city. The mountains provide a substantial degree of protection from typhoons and consequent floods which are common on Korea's east coast. In addition, the mountains cause some light precipitation during the dry years which are frequent in the region.

3.05 Development of the new resort could not proceed without making provision also for improvements to the city of Kyongju and the villages close to Bomun Lake. The resort development is expected to bring about a substantial increase in the local village population, while the expansion of foreign and domestic tourist traffic to Kyongju and Bomun Lake will make great demands on the city's services which will accordingly have to be strengthened.

B. Planning and Environmental Aspects

3.06 The Master Plan for the Bomun Lake resort area is based on the "tourism estate" concept. Under this concept, utilities, services and certain buildings would be provided by the estate as common facilities. The bulk of the available land area would be subdivided into individual lots for the

construction of hotels as well as recreational and commercial developments by private investors. Private development activities would be guided by physical and financial controls, which would be established and enforced by an estate management agency (Annex VIII).

3.07 By attracting and concentrating a large number of hotel developments in one defined area as opposed to haphazard locational decisions of individual investors, planning and installation of both on- and off-site infrastructure are simplified and less costly. At the same time, financial costs to hotel investors for land acquisition and utility investments are substantially reduced. The estate concept benefits the visitor population by making provision for a high level of quality control in regard to environment, services, entertainment, and tourist activities; and also the local population, by establishing a regulated relationship between visitors and the local community.

3.08 The area available for development around Bomun Lake amounts to about 1,040 ha. most of which has already been acquired by the Government. It is envisaged that over a twenty-year period, this area would be developed to provide approximately 6,000 hotel rooms plus condominia, apartment buildings, youth hostels and camping facilities. The present project relates, however, only to the initial stage designed for 3,000 hotel rooms.

3.09 The first stage of the development (Map 3) envisages a ring road around the lake and a street network inside the complex, hotel sites parallel to the shore, an amenity core, recreational facilities, a golf course and club house, and sites for traditional restaurants. The amenity core has been planned as a complete community center and would comprise buildings and spaces for a tourism center, a day-care center and playground, shops, community facilities such as a fire station, a health clinic and a police station, and an administration building. Zoning regulations will require that the height and volume of hotels and other buildings would harmonize well with the surrounding lands and vegetation, and that the spatial distribution of structures would provide from many points views towards the lake, hills and mountains. The land use plan for the Bomun Lake resort would be finalized by consultants in a form satisfactory to the Bank and suitable development controls (such as the above-mentioned zoning regulations) acceptable to the Bank would be established to ensure its effective implementation.

3.10 Despite its substantial size, the proposed development is expected to have almost no negative environmental effects. The present levels of water, air and noise pollution in the Bomun Lake area are relatively low. The area is free from air pollution with the exception of occasional odors which originate from exposed sludge in the lake when the water level is low. This problem would cease when the water level of Bomun Lake would be stabilized by the new Duck-Dong Dam. The water of Bomun Lake is at present slightly polluted by silt and other organic materials due to wash-offs from agricultural areas and the relatively high mineral content of the water from the mountain streams which drain into the lake. Since the Duck-Dong reservoir would act as a sedimentation basin for the mountain waters and since no rice fields will be

cultivated in the area, the water pollution level is expected to decline substantially. A small amount has been included in the loan for the purchase of two boats and spraying equipment to control the growth of algae on the surface of Bomun Lake and the Duck-Dong reservoir. In addition, the sewage treatment plant for Kyongju would substantially reduce the current level of pollution of the Hyung San River, especially near the city's existing water supply intake.

3.11 The development of a sizeable tourism resort at Bomun Lake would create several thousand additional jobs and would, therefore, generate a significant increase in the demand for housing in the area of Kyongju. Part of this increase is expected to be met through the normal expansion of housing by the private sector. In order to insure, however, that adequate housing is available in the project area, the Government has given special priority to Kyongju in the disbursement of subsidized housing funds through the Ministry of Construction. Land for such housing will be provided through land-reclamation under way near the Hyung San River, with utility services extended to the area by the Kyongju City Government (KCG).

C. Project Description

3.12 The project would consist of the following elements listed in more detail in Annex I:

(a) a dam at Duck-Dong and a small irrigation system in the Bulguk area (Map 2);

(b) water supply, sewerage and solid waste disposal systems for the City of Kyongju and the Bomun Lake resort area, and a rural water supply system and environmental sanitation improvements for five adjacent villages;

(c) electrical supply system for the Bomun Lake resort and electrification of five adjacent villages;

(d) access roads to historical monuments and to the Bomun Lake resort, a secondary road and street network within the resort area, tourism infrastructure and common facilities at Bomun Lake, street improvements and an elementary school for five adjacent villages, and a hotel school;

(e) telecommunications facilities for the Bomun Lake resort; and

(f) a feasibility study of a potential new tourist area on Cheju island.

3.13 A multipurpose dam would be built at Duck-Dong, upstream from the present Bomun Lake, to create a reservoir which would enable stabilization

of the Lake level at Bomun. 1/ In addition, the reservoir would provide, in the long term, water supply not otherwise available for the tourist resort and for the increasing needs of the city of Kyongju. Inasmuch as about 1,227 ha of agricultural lands are presently being irrigated from the Bomun Lake, the new reservoir would continue to provide water for this purpose, but it would also enable irrigation of an additional area of 1,200 ha for which an irrigation system would be constructed as part of the project. The principle crops to be grown on the newly irrigated land would be rice, barley, potatoes and other vegetables. A detailed description of the Duck-Dong Dam and the irrigation project is given in Annex IV. Appropriate operating rules would be formulated to regulate the priority uses of water in case of shortages, and adequate administrative arrangements would be made to ensure the enforcement of these rules. The operating rules would be submitted for approval by the Bank within one year of the date of the proposal loan.

3.14 In the short term, particularly during the period when the dam is being constructed and the reservoir is filling up, it may be possible to rely on ground water to supply the Bomun Lake resort area, and appropriate exploration is now under way. If this exploration proves successful, ground water would be a more economical solution in the early years of the project. In the long term, however, demands for water at Bomun and in Kyongju would require that the two water supply systems eventually be linked. Should ground water not be available in sufficient quantity and quality to meet even short-term demands, then the two systems would need to be linked in time for the first hotels at Bomun to be served by water pumped from the new treatment plant at Kyongju. Given the rather limited availability of water from the existing Kyongju City water supply system, however, it would also be necessary to construct a separate water treatment plant at the Duck-Dong reservoir in order to meet the full development needs of the Bomun Lake resort area. Provision for this treatment plant has been included in the project; should sufficient quantities of ground water be available, of course, the treatment plant at Duck-Dong and possibly the link with the Kyongju City network, could be postponed, with the resultant savings utilized to extend the distribution network in the project area.

3.15 The sewerage systems for the Bomun Lake resort area and the city of Kyongju would be interlinked, and a common sewage treatment plant near Kyongju is envisaged. Consultants are to review the preliminary design, and this is likely to result in a recommendation for low-cost, aerated lagoons included in the project. The liquid effluent, after chlorination, would be piped into the Hyung San river downstream from the new water supply intake. At present, Kyongju City has no sewerage system and the river has become polluted near the existing water intake.

1/ 207 families will be displaced by the new dam. The Government is providing funds to re-settle the families elsewhere.

3.16 The solid waste disposal systems for the Bomun Lake resort area and the city of Kyongju would include the collection, segregation and disposal of solid wastes in sanitary fill at selected areas of Kyongju. Eight new collecting trucks would be procured under the project. The water supply, sewerage and solid waste disposal components of the project are described in greater detail in Annex V.

3.17 The electricity component of the project is discussed more fully in Annex VI. The new substation would be located between the city of Kyongju and the Bomun Lake area and be connected to the existing 154-KV transmission line from Ulsan to Pohang with a 9.5 km-long line. Distribution in the resort area is proposed to be accomplished partly by overhead lines and partly by underground cable.

3.18 The project also provides for the construction and/or realignment of four roads totalling about 23 km in length to provide access to various historic and scenic sites and four roads with a total length of about 22 km to provide major access to and within the resort area. In addition, a secondary road and street network of some 12 km is envisaged within the resort area itself. The specifications of the roads as to width of pavement and shoulders differ, but are based on expected traffic flows and physical planning considerations. The roads included in the project are shown in Map 2 and further discussed in Annex VII.

3.19 The tourism infrastructure and common facilities to be constructed at Bomun Lake include storm water drainage networks, environmental sanitation of the Lake basin, earthworks along the Shin Pyong River, community facilities (an amenity core and a service core), an 18-hole golf course and clubhouse, landscaping of the resort area and surroundings, and lighting for the resort area roads and streets.

3.20 A hotel school designed to accommodate about 250-300 students is included in the project. It would consist of a 30-room hotel with all teaching facilities including a language laboratory. Provision is also made for hiring expatriate staff as may be necessary. Justification for including this component in the project is based on the existing lack of hotel training in the area and on the projected manpower needs of the hotels (Annex III, Table 2). The ILO has expressed willingness to assist the Korean authorities in devising an appropriate training program and in recruiting teachers. The Korean authorities will, within six months after the proposed loan is made, submit a training program for approval by the Bank.

3.21 The telecommunications component of the project provides for construction and equipping of facilities for the Bomun Lake resort comprising about 900 telephone lines, telegraph and telex facilities and fax and subscribers' trunk dialing (STD) facilities.

3.22 In connection with the development of basic infrastructure for the Bomun Lake resort area, it would be possible to provide for a number of improvements which would raise the standard of living in five adjacent villages

at relatively small incremental costs. These improvements would consist of rural water supply, environmental sanitation, electrification and street lighting, street improvements, telephone connections and a small elementary school which would serve all five villages. The villages involved are Buk Gun, Son Gok, Chong Dan, Chun Gun and a traditional Silla village which the Government intends to restore and open for tourists who wish to see folk arts and sample traditional Korean food.

3.23 The island of Cheju is situated at a point 400 km southwest of Busan and 450 km west from Shimonoseki. Because of its mild climate during the winter months and its attractive beaches, the island offers considerable potential for international tourism. The Government intends to develop a tourism resort in Cheju, similar to the one proposed for Bomun Lake. The project includes the preparation of a feasibility study for such a resort.

D. Cost Estimates

3.24 The general and detailed cost estimates and the foreign exchange components of the various project elements are given in Annex I and are summarized below:

	Korean Won (millions)			U.S. Dollars (thousands)			% of Base Line Costs
	Local	Foreign	Total	Local	Foreign	Total	
1. Dam & Irrigation System	1,607.9	1,121.7	2,729.6	4,019.9	2,804.2	6,824.0	(16.8%)
Land Acquisition	600.4		600.4	1,501.0		1,501.0	3.7%
Civil Works	731.2	952.6	1,683.8	1,828.0	2,381.3	4,209.3	10.4%
Equipment	48.1	112.3	160.4	120.3	280.7	401.0	1.0%
Professional Services	228.2	56.8	285.0	570.6	142.0	712.6	1.7%
2. Water, Sewerage & Waste Disposal Systems	1,094.8	923.8	2,018.6	2,737.0	2,309.5	5,046.5	(12.4%)
Land Acquisition	141.0		141.0	352.5		352.5	0.9%
Civil Works	481.8	394.3	876.1	1,204.6	985.7	2,190.3	5.4%
Equipment	367.3	449.0	816.3	918.2	1,122.5	2,040.7	5.0%
Professional Services	104.7	80.5	185.2	261.7	201.3	463.0	1.1%
3. Electricity Supply	547.9	625.7	1,173.6	1,369.7	1,564.3	2,934.0	(7.2%)
Land Acquisition	7.1		7.1	17.8		17.8	0.1%
Civil Works	87.5	41.4	128.9	218.7	103.5	322.2	0.8%
Equipment	371.4	557.0	928.4	928.5	1,392.5	2,321.0	5.7%
Professional Services	81.9	27.3	109.2	204.7	68.3	273.0	0.6%
4. Roads & Stormwater Drainage	2,000.6	1,138.7	3,139.3	5,001.5	2,846.7	7,848.2	(19.4%)
Land Acquisition	134.7		134.7	336.7		336.7	0.8%
Civil Works	1,669.8	1,056.2	2,726.0	4,174.5	2,640.5	6,815.0	16.8%
Professional Services	196.1	82.5	278.6	490.3	206.2	696.5	1.8%
5. Tourism Facilities	4,179.4	2,513.7	6,693.1	10,448.5	6,284.3	16,732.8	(41.3%)
Land Acquisition	753.6		753.6	1,884.0		1,884.0	4.6%
Civil Works	2,262.5	1,589.3	3,851.8	5,656.2	3,973.3	9,629.5	23.8%
Equipment	207.7	311.5	519.2	519.3	778.7	1,298.0	3.2%
Professional Services	518.8	98.0	616.8	1,297.0	245.0	1,542.0	3.8%
Promotional Expenses	39.0	261.0	300.0	97.5	652.5	750.0	1.9%
Project Administration	397.8	253.9	651.7	994.5	634.8	1,629.3	4.0%
6. Telecommunications	83.3	220.1	303.4	208.3	550.2	758.5	(1.9%)
Civil Works	21.2	34.9	56.1	53.1	87.2	140.3	0.4%
Equipment	32.8	185.2	218.0	82.0	463.0	545.0	1.3%
Professional Services	29.3		29.3	73.2		73.2	0.2%
7. Feasibility Study	60.0	100.0	160.0	150.0	250.0	400.0	1.0%
Base Line Costs:	9,574.1	6,643.5	16,217.6	23,935.3	16,608.7	40,544.0	100.0%
8. Contingencies							
Physical Increase (15.3%)	977.4	850.3	1,827.7	2,443.5	2,125.8	4,569.3	11.3%
Price Increase (16.3%)	1,048.5	906.2	1,954.7	2,621.2	2,265.5	4,886.7	12.1%
TOTAL PROJECT COST	11,600.0	8,400.0	20,000.0	29,000.0	21,000.0	50,000.0	

3.25 While the August 1972 stabilization measures aim to keep the inflation rate at 3% and have been reasonably successful thus far, provision has been made for an annual price increase of 7% in building, sitework and equipment costs during the construction period. The 7% price increase assumed is below recent trends, which until August 1972 averaged about 10% per year. In addition, an allowance of 15.3% of the construction, siteworks and equipment costs has been made to cover physical contingencies. This is reasonable since most of the cost estimates are based on semi-detailed engineering studies and on reliable cost data for similar works in the area. The details of the allowances made for price and physical contingencies are shown in Annex I, Table 1.7. The provision for contingencies amounts to 24.8% of base line costs or 18.9% of total project cost.

3.26 An allowance of 10.6% of the civil works and equipment costs has been made for professional services required in the final design and supervision stages. This is high by Korean standards, but is appropriate in this case in view of the specialized consulting services which will be required for the final design and/or supervision of certain components (golf course, landscaping, sewerage, dam and irrigation, and physical planning) of the project to supplement the services already provided by the Government's Korean and Japanese consultants. It is proposed that the final design portion of the cost of these consulting services which began on May 1, 1973 (about US$750,000) 1/ be financed retroactively from the proposed loan.

E. Project Execution

3.27 Five Government agencies would be responsible for execution of the major components of the project, assisted by consultant architects and engineers acceptable to the Bank. The five agencies are: (i) the Agricultural Development Corporation (ADC), a semi-autonomous public entity within the Ministry of Agriculture and Fishery; (ii) the Kyongju City Government (KCG); (iii) the Korean Electric Company (KECO), a corporation partly owned by the Government; (iv) the Kyongju Development Office (KDO), which is a department of the Ministry of Construction (MDC); and (v) the Ministry of Communications (MC).

3.28 The activities with respect to the project would be coordinated at the operating level by a project unit which is to be established within KDO and which would include engineers, an architect, a procurement officer, accountants and other staff. The appointment of a full-time head for the project unit, acceptable to the Bank, would be a condition of loan effectiveness. Overall coordination would be provided by the Secretariat for Economic Affairs in the Office of the President, which has effectively coordinated work completed so far and to which KDO reports directly, as well as to the Ministry of Construction.

1/ This represents 1.5% of the total project cost.

3.29 The Agricultural Development Corporation (ADC) would be responsible for the design and construction of the Duck-Dong dam and the related irrigation works. ADC has gained experience on two Bank-financed projects, the Pyongtaek-Kumgang Irrigation Project and the Yong San Gang Irrigation Project, but will still require some assistance from consultants in designing and implementing the dam and irrigation component of the proposed project. Final designs for the dam and irrigation works would be approved by the Bank.

3.30 The Kyongju City Government (KCG) would be responsible for the design and construction of the water supply, sewerage and solid waste disposal component of the project, with the assistance of consultants agreed to by the Bank. Final designs for the water supply, sewerage and solid waste disposal systems would be approved by the Bank.

3.31 The Korean Electric Company (KECO) would be responsible for the design and construction of the electricity component of the project. The project would be a very small part of KECO's total system expansion and the company is well qualified to carry out the project. Final designs for the electricity component would be subject to Bank approval.

3.32 The Kyongju Development Office (KDO) would be responsible for the design and construction of all the remaining infrastructure works included in the project. KDO is an effective organization capable of executing its part of the project, but will require some assistance from qualified consultants. Final designs for the works to be carried out by KDO would be submitted to the Bank for its approval.

3.33 The telecommunications facilities would be carried out by the Ministry of Communications (MC), but would not be part of the package of works to be financed from the Bank loan.

3.34 During negotiations, assurances were obtained that ADC, KCG, KECO, KDO and MC would complete the preparation by March 1, 1974 of a critical path network acceptable to the Bank for carrying out all parts of the project and that the network would be reviewed internally by all parties concerned at least monthly. The results of such reviews would be communicated to the Bank on a quarterly basis.

F. Financing Plan

3.35 The total estimated financial requirements of the project are Won 20.0 billion (US$ 50.0 million equivalent). It is proposed that the Bank's loan should cover half of total project costs. The balance would be provided mainly through budgetary allocations of the Government. Assurances were obtained during negotiations that the Government would meet any cost overruns and would make arrangements satisfactory to the Bank to provide capital funds for the project as and when needed.

3.36 The consolidated financing plan for the Project, excluding interest during construction and working capital, can be summarized as follows:

(U.S. Dollars millions)

Project Component	Estimated Cost /2	Sources of Funds		
		Bank Loan	Government Contribution	Internally Generated
Duck-Dong Dam and Irrigation Component (ADC)	8.3	3.8	4.5	-
Water Supply, Sewerage Waste Disposal (KCG)	6.4	3.3	2.2	0.9
Electricity (KECO)	3.7	2.4	-	1.3
Roads and Storm Water Drainage (KDO/KCG)	9.8	4.4	5.4	-
Tourism facilities /1 (KDO)	20.4	10.9	9.5	-
Telecommunications (MC)	1.0	-	1.0	-
Feasibility Study	0.4	0.2	0.2	-
Total	50.0	25.0	22.8	2.2

/1 Including the hotel training school to be built by KDO but operated by the Bureau of Tourism.
/2 Including contingencies.

The Government has indicated that its contributions would be made in the form of budgetary allocations with no fixed repayment terms. The proceeds of the Bank loan would be made available to ADC, KCG, KECO and KDO on terms appropriate for the particular project components to be financed. Details of assumptions made for financial forecasts are included in the respective annexes for these project components.

G. Lending Arrangements

3.37 The proposed loan of US$25.0 million would cover the foreign exchange costs of the project estimated at US$21.0 million equivalent and would provide about US$4.0 million for local currency financing (approximately 13.8% of the total local currency costs of the project). These estimates reflect

the expectation that about US$9.1 million of major civil works contracts (out of a total of US$30.0 million for all civil works) would be won by foreign bidders, and that most equipment suppliers would be foreign. Should local manufacturers win all equipment supply contracts, the local expenditure financing from the proposed Bank loan might increase by about US$6.5 million to US$10.5 million. ADC, KCG and KECO would receive portions of the Bank loan on the basis of subsidiary loan agreements to be concluded between each of these agencies and the Government and to be approved by the Bank. The Bank would enter into separate project agreements with ADC, KCG and KECO which would specify the obligations of each of these agencies with regard to the project. Commitments relating to the project components to be carried out by KDO and MC have been included in the draft Loan Agreement between the Bank and the Government of Korea.

H. Procurement

3.38 Major civil works and equipment contracts would be awarded under international competitive bidding in accordance with the Bank guidelines. Project items would be grouped to the extent possible in order to encourage such competitive bidding, but domestic bidders would also be able to bid on individual items. Bid packages were agreed during negotiations. The proposed project is within the capacity of the Korean construction industry to implement, but it is expected that foreign contractors would submit bids for the larger contracts. Some smaller contracts (e.g., the civil works of the water supply and sewerage component, Bomun Lake earthworks and waterworks, improvement of existing villages) would probably be too small to attract foreign bids. It was agreed during negotiations that these contracts, each not to exceed US$50,000 in value, would only be advertised locally. The total value of such contracts is estimated at about US$2.8 million equivalent.

3.39 Responsibility for advertising requests for tenders, issuing tender documents, evaluating bids and awarding contracts for all project components would rest with the Office of Supply of the Republic of Korea (OSROK) which is the central procurement office for all Government agencies. The various executing agencies, assisted by consultants, would, however, retain responsibility for the technical aspects both in the preparation of tenders and in the evaluation of bids. In evaluating bids, domestic preferred manufacturers of equipment and furniture would be allowed a preferential margin of 15% of the c.i.f. costs of competing imports or the prevailing level of customs duty, whichever is the lower.

I. Disbursements

3.40 Disbursements from the Loan Account would cover: (i) 55% of total cost of civil works and associated services, excluding land acquisition;

(ii) 100% of foreign expenditures or of the ex-factory cost of locally-manufactured equipment, furniture and materials; and (iii) 100% of foreign expenditures on technical services for the feasibility study of Cheju Island. Any savings on purchases of equipment would be utilized by increasing the percentage financing of civil works. Retroactive financing of up to US$750,000 would be allowed on account of expenditures for consulting services made after May 1, 1973 (see para. 3.26). Disbursements would be made for certain works carried out at Kyongju and Bomun Lake by ADC, KCG, KECO and KDO (Chart 1). In addition, relatively small amounts would be disbursed for the hotel training program for which the Bureau of Tourism would have operational responsibility and for the Cheju Island feasibility study for which the Ministry of Transportation would be responsible. The estimated schedule of loan disbursements is shown in Annex I, Table 3.1. Applications for disbursement would be submitted by the government-authorized agent within each of the organizations in order to speed up disbursements, with copies sent to the Economic Planning Board.

4. JUSTIFICATION

A. Market Demand

4.01 Evaluation of the probable growth in foreign visitor traffic to Kyongju necessarily begins with an assessment of the likely growth in Japanese foreign vacation travel. The extraordinary increase in vacation travel from Japan over the period of 1968-1972 (with an average annual growth rate of almost 60%), the continued rapid growth of the economy, and the major changes in the exchange value of the yen over the past two years all point to a further rapid expansion of the Japanese foreign travel market (Annex II, Table 4). Japanese vacation travellers abroad are estimated to number more than 1.4 million in 1973 and to increase to about 10 million by 1980. 1/ Though large in absolute terms, the latter figure implies a growth rate (35% p.a.) little more than half that realized in the past five years.

4.02 The number of Japanese going to Korea more than doubled from 1971 to 1972 (96,500 vs. 217,300); this figure represented about 16% of total Japanese foreign travel in 1972. Of the Japanese visiting Korea more than 80% are vacationers. Over the next decade, the proportion of Japanese vacation visitors going to Korea is projected to decline slowly (from 16% of the total in 1972 to about 11% in 1980), reflecting primarily the expectation that with rising incomes in Japan more people will be able to visit more distant destinations.

1/ A comparison with Britain is illuminating. Despite marked differences, the similarities between the highly industrialized, urbanized and relatively affluent island societies of Britain and Japan provide some basis for such a comparison. In 1972, out of the total British population of 52 million, about 8.5 million went abroad on vacation. For a Japanese population exceeding 100 million and with a per capita income substantially above the British, even the projection of 10 million foreign vacationers in 1980 might prove rather conservative.

4.03 While the Japanese will supply most of the vacation visitors to Korea in the foreseeable future, continuing growth is expected in the number of vacation visitors from the U.S. and other countries (Annex II, Table 10). In total, vacation visitor traffic to Korea is projected at about 1.3 million in 1980 and at 1.7 million in 1982. This implies a growth rate of 23% per year, as compared with 50% per year in the period 1966-1972.

4.04 Within the country, Kyongju is expected to become at least for a number of years the principal center of interest for foreign visitors after Seoul. Transport connections with Seoul and Busan by railway and the new expressway are good. At present foreign visitor traffic to Kyongju is limited by the lack of tourist amenities and particularly accommodation. With the development of the Bomun resort and the provision of other amenities in the area (including the golf course) 1/, the number of foreign visitors to Kyongju (both day and overnight visitors) is expected to increase from 76,000 in 1972 to 233,000 in 1976 and 1.2 million in 1982. The number of foreign visitors staying overnight in Kyongju is projected to be about 116,000 in 1976 and 800,000 in 1982 (Annex II, Table 12).

4.05 Even with the provision of a variety of tourist attractions apart from the cultural and historical sites, it is expected that the average length of stay of foreign visitors to Kyongju will continue to be quite short. At present, for those visitors staying overnight, the average length of stay is about 1.5 days; it has been assumed conservatively that this would rise to 1.7 days in 1982.

4.06 The flow of Japanese travelling abroad has been rather even through the year, as has also been the flow of foreign visitor traffic to Korea. With moderate seasonal fluctuations, a rather high average room occupancy rate at the Bomun resort can be assumed; this has been projected at 50% in the early years of the resort, rising to 75% by 1982. Average double occupancy has been estimated at 1.6.

4.07 On the basis of the above estimates of visitor numbers and assumptions of length of stay and occupancy factors, the number of rooms required to accommodate foreign visitors in the resort would be 600 in 1976 and 3,000 in 1982. The average daily expenditure has been estimated to be about US$43.00 for overnight guests and US$10.00 for day visitors, in 1973 prices.

B. Hotel Development

4.08 The Government projects the build-up of hotel capacity at Bomun Lake as follows:

1/ Golf has become an increasingly popular game in Japan where there are now estimated to be roughly 20 million active participants, a number equalled only in the U.S. Golf is, however, an expensive sport in Japan where land close to metropolitan centers is scarce and very costly. Thus, the provision of golfing facilities at Bomun is considered a major potential attraction.

Year	Hotel Rooms
1973	0
1976	600
1979	1,500
1982	3,000

At the same time there will be further development of hotels of lower categories in Kyongju city designed mainly to serve domestic tourists. The Government expects that there might be about 1,500 rooms in hotels of these categories by the early 1980's.

4.09 It is expected that a number of the hotel investments at Bomun would be made by joint ventures of Korean and Japanese investors. Such joint ventures have already been responsible for developing several of the largest new hotels recently completed or now under construction in Seoul. Considerable interest has been shown by both Japanese and Korean investors in the Kyongju-Bomun area, but no binding commitments have yet been made. This could not be expected at the present stage of development of the project, since the master plan for the resort has just recently been finalized and work on implementing the project has not yet started. However, the prospects for hotel investment are considered favorable in view of the good market possibilities of the area and the relatively high profitability of hotel operations in Korea.

4.10 A projection of the gross operating profits for hotels in the Bomun Lake resort area is given in Annex III, Table 1. According to these estimates, the gross operating profits on 3,000 hotel rooms when the resort is in full operation would result in a return of about 21% on the capital invested in hotels, after allowing for the charges to be made for utilities and other services to be provided at the resort. 1/ After deducting land-lease payments and depreciation charges, the return on capital invested would amount to about 17%. 2/ The return on equity, of course, would depend both on the capital structure of the investor and on the terms and conditions of debt financing; on any reasonable assumption regarding terms and conditions of loans, however, the return on equity should prove attractive.

4.11 In addition to the favorable environment for investment, the general concept of the project is expected to be attractive to investors. Prospective hotel developers will find a carefully-planned area with all infrastructure provided, with adequate zoning and controls over neighboring developments, and with common amenities provided such as the golf course, shopping center and marina. These are expected to prove significant attractions.

1/ The basis on which utility and service charges would be levied is described in paras. 5.11 and 5.13 and in Annexes V and VI. Land-lease charges are described in para. 5.21 and Annex VIII.

2/ Government regulations also provide for a five-year income tax holiday as an incentive to hotel investments (see para. 2.12).

4.12 Nevertheless, the risks involved in starting a new resort are greater than expanding one already established. Most hoteliers are understandably reluctant to be alone in a new resort. One of the primary functions of the proposed resort operating agency, therefore, would be to encourage hotel investments at the Bomun Lake resort through promotional efforts and through the development of land lease and sales policies designed to attract qualified private investors. Since the economic viability of the proposed infrastructure investment program would depend essentially on the timely development of hotel accomodation, agreement was reached during negotiations that the Government would take all necessary steps to ensure that the minimum number of rooms required for the economic viability of the project (estimated to be 1,600) would be in operation by December, 1982.

C. Economic Justification

Economic Returns

4.13 The gross benefits resulting from the tourism-related component 1/ of the project are taken to be only the expenditures made by visitors in the Kyongju-Bomun Lake area. Although some portion of the (net) revenues of international and domestic transportation of these visitors is properly attributable to the project, this has not been taken into account in the calculation of project rates of return. The relevant costs include the capital and operating costs of the infrastructure provided under the proposed project, plus the capital and operating costs of hotel accommodation and related superstructure in the project area such as restaurants and entertainment facilities.

4.14 With an estimated economic life of the project of 25 years, the economic rate of return on the tourism-related program of investments would be 18.5%. (It has not been found appropriate to use shadow pricing of labor or foreign exchange in calculating the economic return.) It has been assumed that foreign investors would be interested in developing hotels at Bomun (para. 4.09). Assuming that one half the hotel rooms would be financed from abroad, the rate of return on the purely domestically financed investment (including the Bank loan, but excluding both the foreign private investment and the net repayments and other returns accruing to foreigners) would be 20.7%. This is because foreign hotel investors would not participate in those benefits of the project arising from tourist expenditures outside the hotels and would receive an after-tax return on their investment somewhat

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1/ The tourism-related component includes the site development and infrastructure works for the Bomun Lake Resort complex (including the access roads to various monuments), plus the costs of hotels and other superstructure. This component represents over 90% of the total program of investments. The two additional project components are the utilities outside of the Bomun resort area and the irrigation component, described in the following paragraphs.

lower than the project's overall rate of return - thus raising the share and the rate of return accruing to domestic capital (including the Bank-financed portion). As the returns both on the overall project and on the Korean funds invested in it (including IBRD funds) are quite satisfactory, the project is acceptable under any reasonable assumption about its impact on foreign capital inflows into the Korean economy (see Annex III, para. 12). The rate of return would be sensitive to changes in several project variables, as shown below:

Sensitivity Testing		Resultant Rate of Return (%)
(i)	Investment cost + 10%	17.1
	+ 20%	15.9
(ii)	One-year delay in opening	17.4
	Two-year delay in opening	16.4
(iii)	Gross operating profits of hotels and related facilities	
	(a) +10%	19.9
	(b) -10%	17.0

4.15 The development of the Bomun Lake resort on a planned and integrated basis will help avoid the disfigurement of the area by uncontrolled and unsuitable structures and the higher social costs which would result from haphazard development. As these benefits are quite difficult to quantify, they are not reflected in the rates of return shown above.

4.16 In addition to the Bomun Lake resort facilities, the project includes investment in water supply, sewerage and solid waste disposal systems for the city of Kyongju and provides for some infrastructure investments in several villages near the resort area. These improvements would constitute an important benefit to the local population. To the extent that this benefit is reflected in water and sewerage charges, it has been taken into account in the calculation of the return on the investment in utilities. Further details of the projected revenues and costs of the utilities are provided in Annexes V and VI. Other benefits, such as a decrease in public health hazards or an increase in the value of properties, are difficult to quantify in any meaningful way and have been omitted.

4.17 The irrigation component of the project includes that portion of the dam properly attributable to it, plus the investments in the irrigation system itself. A separate justification of this component is contained in Annex IV. The economic return on the irrigation component, assuming an economic life of the irrigation system of 50 years, would be 13.7%.

4.18 When the entire program of capital and operating costs in tourism-related investments, the utilities component and the agricultural component

is measured against the combined gross benefits of these components, 1/ the overall rate of return would be 16.5%.

D. Employment and Balance of Payments Effects

4.19 When fully operational in 1984, the project is expected to provide direct employment for about 5,400 workers in the hotels and 1,500 in other facilities of the resort. Indirect employment generated in construction, agriculture, handicrafts, transportation and other services, is difficult to estimate accurately but could amount to 10-15,000 persons.

4.20 The proposed project is expected to increase gross foreign exchange receipts by about US$8.4 million in 1976 when the first hotels open and by US$71.0 million per year by 1984 when the project's "typical year" occupancy has been reached. This compares with US$74.7 million in foreign exchange receipts derived by Korea from tourism in 1972. Because of the high proportion of foreign tourists expected to visit the area and the low import content of operating costs of tourist facilities (10% for existing hotels in Korea), the estimated net foreign exchange earnings of the project are relatively high. Assuming that roughly one-half of the hotel rooms would involve foreign ownership, and assuming that the foreign participants would fully repatriate their projected dividends, net foreign exchange earnings, after accounting for the foreign exchange component of operating and capital costs, and profit repatriation, would amount to US$7.9 million in 1976 and US$62.8 million in 1984. This compares with the estimated foreign exchange component of the proposed project of US$18.8 million including price contingencies, and the estimated foreign exchange component of superstructure of about US$25.0 million.

5. INSTITUTIONAL AND FINANCIAL ASPECTS

A. Operating Responsibilities

5.01 Responsibility for operation, maintenance and administration of the facilities to be constructed under the project would devolve upon various agencies. The following is a schematic summary of the agencies and their respective responsibilities (Chart 2):

1/ The benefits of the public utilities component are valued at market prices.

	Project Component	Operating Agency
i.	Irrigation System	Agricultural Development Corporation (ADC), together with other appropriate Government agencies.
ii.	Water Supply, Sewerage and Waste Disposal (including Duck-Dong Dam)	Kyongju City Government (KCG) - Water and Sewerage Division
iii.	Electricity Supply (including distribution and street lighting at Bomun)	Korean Electric Company (KECO)
iv.	Telecommunications	Ministry of Communications (MC)
v.	Roads, Bridges and Storm Water Drainage	KCG - Municipal Organization
vi.	Bomun Resort Facilities	Kjongju Tourist Agency (KTA)
vii.	Hotel Training	Bureau of Tourism

5.02 Whereas ADC, KECO, MC, KCG and the Bureau of Tourism are well established corporations or agencies already responsible for operation of other facilities in their respective fields, the KCG Water and Sewerage Division has just been created and KTA has yet to be created. These two new agencies would bear the main responsibility for ensuring that during the operational phase adequate and efficient infrastructure services are provided to the resort area, and that user charges in the form of utility rates, service charges, lease rents and land sale prices are sufficient to cover operating costs and depreciation, and provide a reasonable rate of return on the investments.

5.03 As far as electricity supply and telecommunications are concerned, these responsibilities would be assumed by KECO and MC, both of which already operate within the framework of tariff regulations set to achieve the financial objectives of public utilities. ADC and the KCG municipal organization, on the other hand, would be governed by operational and financial principles consistent with the character of their investments; these are discussed in Annexes IV and VII, respectively.

B. Institutional Arrangements

5.04 The Government is presently setting up a separate Water and Sewerage Division which would operate in accordance with sound public utility

practices and would be organized and staffed as shown in Chart 3. The establishment of this new division within the Kyongju City Government has been confirmed during negotiations.

5.05 To ensure that KCG would manage and control its water supply, sewerage and waste disposal operations in accordance with sound public utility principles, KCG would be required to engage management consultants acceptable to the Bank to establish a commercial system of accounts. From January 1, 1975, this system of accounts would be implemented and independent auditors acceptable to the Bank would be engaged by KCG to audit the financial statements of the Water and Sewerage Division for the year ending December 31, 1975, and annually thereafter; these statements would be submitted to the Bank within four months after the end of each calendar year.

5.06 The responsibilities of KDO, as an office of the Ministry of Construction, are presently much wider than those envisaged for the KTA. KDO has been responsible for the restoration of monuments, the construction of access roads and parking spaces, river embankments and the new museum, as well as for the development of the Bomun resort. KDO is not expected to have a continuing role once the present development program is completed, nor is it in any sense a commercially-oriented organization. Hence the Government has agreed that a new organization (KTA) would be created to own and operate the new resort. KTA, the key staff of which would be part of the project unit in KDO prior to the establishment of KTA, would be commercially oriented and would be structured to provide managerial, administrative and maintenance services within the Bomun resort area (Annex VIII and Chart 3).

5.07 KTA would be responsible for implementing a development policy whose objectives would be:

(i) to recover, through adequate charges to the beneficiaries, the capital and operating costs for services provided to them;

(ii) to exercise a lease and sales policy designed to attract private investors qualified to provide tourist accommodations and other facilities compatible with projected tourist demand;

(iii) to prepare and implement plans for additional facilities, buildings and improvements which are not included in the initial phase of the project and to adjust the project program to changing market conditions;

(iv) to enhance the environment by guiding private development activities through the application of appropriate development controls; and

(v) to contribute to the welfare of the local community through regulations concerning hotel employee training

programs and employment policies of individual hotel operators and through consultation with the Kyongju City Government on matters of common concern, such as an equitable distribution of utility charges between beneficiaries in the city and the resort area.

5.08 During negotiations, assurances were obtained from the Government that a statement setting out the purpose, the organizational structure and the development policies of KTA would be prepared and submitted to the Bank for its approval by July 1, 1974. Agreement has also been reached that KTA would be established by January 1, 1975, and that the appointment of its key staff would be made in consultation with the Bank.

5.09 KTA would be required to engage management consultants acceptable to the Bank to establish a commercial accounting system. This system of accounts would be implemented from January 1, 1975. Agreements were reached during negotiations regarding regular audits and the submission of financial statements corresponding to those mentioned in para. 5.05.

5.10 Inasmuch as the project would be executed and operated by various agencies as mentioned in para. 3.24 and 5.01, working level co-ordination of construction would have to be exercised by KDO. Appropriate arrangements for submission of reports on project execution and financing by these various agencies were agreed upon during negotiations. Such reports and statements would be prepared with the assistance of qualified consultants, where necessary, and the reports of each agency should be subject to internal and external audits satisfactory to the Bank.

C. Financial Objectives

5.11 The basic financial objective which the Government would be expected to achieve in respect of facilities provided by the project is the recovery of its investments in the various project components, including a reasonable rate of return, from charges to the beneficiaries. The achievement of this objective in respect of the resort area is necessarily conditioned by the ability of KTA to charge the hotels with the full capital and operating costs of infrastructure without endangering their profitability, which is a prerequisite for the continued operation of the hotels.

5.12 The Government would also take into account the ability of the farmers to pay for irrigation water. This is reflected in the level of water charges for the irrigation component which are expected to provide for recovery of about 40% of the original investment at 3.5% interest over a period of about 40 years. These terms are consistent with those of other irrigation projects in Korea financed partly by the Bank.

5.13 Water supply, sewerage and electricity charges would be designed to meet the conventional objectives of providing the utility entities with reasonable rates of return on net fixed assets in operation and ensuring continuing financial viability of these entities through the maintenance of a satisfactory debt service coverage.

D. Financial Forecasts - Utility Operations

5.14 Financial forecasts for water supply, sewerage and waste disposal operations of KCG are included in Annex V. These forecasts show that KCG's Water and Sewerage Division would be able to achieve satisfactory financial results with rates of return ranging from initially 7% to about 11% in 1982. The Division would repay to the Government its share of the proceeds of the Bank loan over 20 years with 5 years' grace at 7.25% interest. Because of the favorable debt/equity ratio (ranging from 43% to 29% of total capitalization) the debt service coverage would be 1.7 or better throughout the operational period.

5.15 The main assumption made in the forecasts is the application of water and sewerage charges which would place the burden for the extension of services to the resort area on the hotels; this would also implicitly include the charge for use of the dam as required for stabilization of the lake level (see para. 3.13). The assumed water and sewerage charges for hotels would be 2.5 times higher than those for commercial users in the city. Details of the tariff structure assumed are provided in Annex V.

5.16 During the development period (1977-1981) the assumed direct user charges would be supplemented by annual payments made by the Government on behalf of KTA in an estimated amount of Won 512 million (US$ 1.29 million) in lieu of additional direct user charges. These payments would be treated initially as deferred expenses by KTA and would eventually be included in the calculation of hotel charges (para. 5.23). This would ensure full recovery of all capital and operating costs from the beneficiaries without Government subsidies and without excessive direct user charges during the initial period of hotel development. Financial covenants have been agreed upon during negotiations which would set adequate performance standards for the KCG Water and Sewerage Division to meet this objective and to allow the Division to earn an overall rate of return on net fixed assets in operation, suitably adjusted for changes in price levels, of 7% in the first four years and 8% thereafter. To safeguard the Division's financial position, the Division would not undertake other expansion during the construction of the Bank project, and would not incur additional long-term debt without the Bank's approval if its net revenue should be less than 1.5 times the maximum future debt service requirements.

5.17 Financial forecasts for the electricity supply component of the Project are included in Annex VI. These forecasts show that by applying its

existing electricity tariffs to the consumers in the resort area KECO would earn a satisfactory rate of return on its incremental investment, provided that the extra cost of providing underground distribution facilities in the resort area would be borne by KTA. During negotiations, agreement was reached that appropriate financial arrangements between KECO and KTA would be made for this purpose.

E. Financial Forecasts - Kyongju Tourism Agency

5.18 The Kyongju Tourism Agency (KTA), to be established by January 1975, would administer the Bomun Lake resort. KTA would acquire title to the land and certain facilities at the resort site and would obtain revenues from the lease or sale of land and facilities and from annual service charges to hotels and other establishments (shops, restaurants and recreational facilities).

5.19 The total capital requirement for the development of the Bomun Lake resort is estimated at US$22.72 million, including financial charges of US$2.32 million during construction (Annex VIII). Of the total, 48% is proposed to come from the Bank loan, 14% from Government advances and the rest in the form of Government equity contribution. KTA will be expected to repay to the Government the proceeds of the Bank loan over 25 years with 5 years grace at 7.25% interest per annum. The Government would pay the interest on the Bank loan during the grace period. These interest payments would be capitalized by KTA over the five-year grace period at 7.25% and would be repaid over 20 years. These conditions would be reflected in an agreement to be concluded between the Government and KTA when the latter is established. The terms of this agreement would be subject to approval by the Bank.

5.20 The financial projections for KTA cover the investment expenditures at the resort, revenues from the lease or sale of sites, the shopping center and the golf course, revenues from the sale of services, and the expenses of operating and maintaining such services. Details are provided in Annex VIII, Tables 1, 2, and 3.

5.21 Revenue projections assume that 25% of the land set aside for hotel sites would be sold and the rest would be leased. These projections assume an average land sale price of US$40 per m^2 and an average annual land lease price of US$350 per room for hotels. Rents for other superstructure establishments are projected at appropriate percentages of their expected gross revenues. Annual service charges are based on the projected gross operating profits of hotels and other establishments at relatively conservative rates. Experience may show that higher prices can be charged once the resort is established.

5.22 The operating costs include maintenance of the infrastructure facilities in the resort complex, promotional and administrative activities for the resort, and a small amount (US$25,000 per year) paid to local

agricultural committees as rent for the use of Bomun Lake. Of these, the major item is maintenance costs. The promotional expenses and administrative costs are based on agreed work programs to carry out these tasks adequately.

5.23 The Government, on behalf of KTA, would make development contributions to KECO to cover the additional costs of providing underground electricity distribution facilities in the resort area (para. 5.17) and to KCG to supplement direct user charges for water supply and sewerage in the resort area during the initial years of hotel development (para. 5.16). The development contributions, charged to KTA, would be treated as deferred expenses by KTA and would amount to about Won 1.4 billion. KTA is expected to recover this amount through its charges to the hotels, including the sales proceeds of developed lots, within about ten years. Amortization of the deferred expenses over this period is included in the financial projections of KTA (Annex VIII, Tables 1, 2, and 3).

5.24 On the basis of the above assumptions, and given the conservative revenue projections made, KTA's financial position would be sound. Despite some small losses in the years 1979-80, the financial rate of return (net income before interest as a percentage of total net assets) reaches 7.1% by the time full utilization of the hotels is achieved in 1984. The debt service coverage shown in the cash flow projection is quite satisfactory.

5.25 Because of the nature of KTA's operation, the financial projections do not represent standards of performance which can be regulated by financial covenants such as a rate of return requirement. During negotiations agreement was therefore reached that KTA would formulate in agreement with the Bank financial objectives and regulations governing lease rents, sales prices and service charges. In addition, KTA would have its accounts and financial statements for each fiscal year audited by independent auditors acceptable to the Bank.

5.26 In addition to the financial return to KTA in its operation of the resort, the Government is expected to receive substantial tax revenues from hotels and other superstructures. Over the period to 1998, the total tax revenue is estimated to amount to at least US$90.0 million in 1973 prices.

6. AGREEMENTS REACHED AND RECOMMENDATIONS

6.01 During negotiations agreement was reached and assurances were obtained with respect to the following:

(a) formulation of operating rules for the Duck-Dong reservoir by ADC and KCG and submission of these rules for approval by the Bank within twelve months after signing of the loan (para. 3.13);

(b) preparation of a hotel personnel training program by the Bureau of Tourism and submission of this program for approval by the Bank within six months after signing of the loan (para. 3.20);

(c) appointment of consultant architects and engineers acceptable to the Bank and submission of final designs of all project components for approval by the Bank (paras. 3.28, 3.29, 3.30, 3.31, and 3.32);

(d) preparation by March 1, 1974 of a critical path network by KDO in cooperation with the respective agencies carrying out individual project components, regular review of such network by the agencies and submission of the results of such reviews to the Bank (para. 3.34);

(e) coverage of cost overruns by the Government and provision of funds to the executing agencies on terms satisfactory to the Bank (paras. 3.35 and 3.36);

(f) promotional efforts and the development of lease and sales policies designed to attract qualified private hotel investors, plus whatever additional steps are necessary to ensure that a minimum of 1,600 hotel rooms are in operation by December 1982 (para. 4.12);

(g) the transfer of assets and liabilities relating to the Duck-Dong Dam from ADC to KCG upon completion of construction (para. 5.01 and Annex V, para. 28);

(h) the maintenance of roads by KCG and the provision of funds for such purpose (para. 5.01 and Annex VII, para. 14);

(i) preparation of a statement setting out the purpose, organizational structure and development policies of KTA and submission of the statement for approval by the Bank by July 1, 1974 (para. 5.08);

(j) establishment of KTA by January 1, 1975 and appointment of key officers in consultation with the Bank (para. 5.08);

(k) engagement of management consultants acceptable to the Bank to establish commercial accounting systems for the KCG Water and Sewerage Division and for KTA (paras. 5.05 and 5.09);

(l) appointment of auditors acceptable to the Bank and submission of audited financial statements to the Bank by the Water and Sewerage Division of KCG and by KTA (paras. 5.05 and 5.09);

(m) preparation of reports on overall project execution by KDO and submission of these reports together with audited financial statements of all agencies carrying out individual parts of the project to the Bank (para. 5.10);

(n) the establishment of charges for irrigation water designed to recover 40% of the investment in the irrigation component at 3.5% interest over a period of 40 years (para. 5.12);

(o) the payment by the Government on behalf of KTA of development contributions to KCG (paras. 5.16 and 5.23);

(p) establishment and maintenance of water and sewerage rates by KCG which would produce an overall rate of return on net fixed assets in operation, suitably adjusted for changes in price levels, of 7% during the first four years of operation and 8% thereafter (para. 5.16);

(q) limitation of the KCG Water and Sewerage Division's other construction activity during the construction of the Bank project and of the incurrence of long-term debt (para. 5.16);

(r) the payment by the Government on behalf of KTA of development contributions to KECO (paras. 5.17 and 5.23);

(s) the agreement to be concluded between the Government and KTA specifying the terms and conditions satisfactory to the Bank for the onlending of parts of the proceeds of the Bank loan (para. 5.19);

(t) formulation by KTA, in agreement with the Bank, of financial objectives and regulations governing lease rents, sales prices and service charges (para. 5.25).

6.02 The following would be conditions of effectiveness of the proposed loan:

(a) adoption of suitable development controls acceptable to the Bank to assure effective implementation of the land use plan for the Bomun Lake resort area (para. 3.09);

(b) appointment of a full time head acceptable to the Bank for the project unit within KDO (para. 3.28); and

(c) conclusion of the subsidiary loan agreements between the Government and three executing agencies (ADC, KCG and KECO), specifying terms and conditions satisfactory to the Bank for the onlending of parts of the proceeds of the Bank loan (para. 3.37).

6.03 Having regard to the agreements reached during negotiations, the project is suitable for a Bank loan of US$25.0 million equivalent for a term of 25 years, including a grace period of seven years.

KOREA

APPRAISAL OF THE KYONGJU TOURISM PROJECT

PROJECT DESCRIPTION

The project consists of the following elements to be executed by the Government agencies indicated:

A. Agricultural Development Corporation

(i) Construction and equipping of a dam at Duck-Dong with spillway and reservoir outlet works to Bomun Lake.

(ii) Construction and equipping of an irrigation system at the Bulguk area (Map 2) with reservoir outlet works, canals, flumes, conduits, tunnels and a pumping station.

(iii) Land consolidation for about 1,100 ha at the Bulguk area.

B. Kyongju City Government (Water, Sewerage and Solid Waste Disposal)

(i) Construction and equipping of the expansion of the water supply system for the City of Kyongju with a new water pump station, a pre-stressed concrete and steel pipeline, and a secondary distribution network.

(ii) Equipping of a new water treatment plant for the City of Kyongju.

(iii) Construction and equipping of a sewerage system for the City of Kyongju with a sewage collection network, an interceptor sewer, a sewage pumping station, an outfall sewer, and aerated lagoons.

(iv) Acquisition of trucks for collecting solid waste at the City of Kyongju and at Bomun Lake resort.

(v) Construction and equipping of a water supply system for Bomun Lake resort with a booster pumping station at Kyongju service reservoir, a reinforced concrete reservoir at Bomun, transmission pipeline from Bomun to Kyongju service reservoir booster pumping station, a distribution network including a booster pump for the golf course, and a water treatment plant and intake pipeline to the Duck-Dong intake tower.

(vi) Construction and equipping of a sewerage system for Bomun Lake resort with a sewage collection network, three small lift stations, a main sewage lift station, gravity outfall sewers, and aerated lagoons.

(vii) Rural water supply system and environmental sanitation for the five adjacent villages.

C. Korean Electric Company

(i) Construction and equipping of an electrical supply system to meet the demand of the Bomun Lake resort and five surrounding villages, with a 154 KV, double circuit transmission line, an electrical substation and a 22.9 KV distribution system with underground cables in the resort area.

D. Kyongju Development Office

(i) Construction of four roads (including bridges) totalling about 23 km in length to provide access to historical monuments and scenic sites (Map 2).

(ii) Construction of four roads (including bridges) totalling about 22 km in length to provide major access to and within the Bomun Lake resort (Map 3).

(iii) Construction of a secondary road and street network of about 12 km within the resort area itself (Map 3).

(iv) Relocation of three roads to be affected by the Duck-Dong Reservoir.

(v) Construction and equipping of tourism infrastructures and facilities in Bomun Lake resort and adjacent villages, including storm water drainage networks, environmental sanitation of the Lake basin, earthworks and waterworks along the Shin Pyong River, community facilities at Bomun Lake (an amenity core and a service core), an 18-hole golf course and clubhouse landscaping of the Bomun Lake resort area and surroundings, and facilities for the five adjacent villages (street improvements, and an elementary school).

(vi) Construction and equipping of a hotel school with training facilities for 250-300 students, and with a 30-room hotel.

(vii) Lighting of the streets at Bomun Lake resort.

E. Ministry of Communications

(i) Construction and equipping of telecommunication facilities for the Bomun Lake resort comprising 900 telephone lines (including those for the adjacent villages), telegraph and telex facilities and fax and subscribers' trunk dialing (STD) facilities.

F. Ministry of Transportation

(i) Preparation of a feasibility study for a tourism complex on Cheju Island.

Statistical Appendix to Annex I

PROJECT COST ESTIMATES

1. General Cost Estimates

2. Detailed Cost Estimates

3. Schedule of Disbursements

Notes to cost estimate tables

1. General Cost Estimates

The total project cost has been estimated at US$50.0 million. As contingency allowances, about 9.1% of the total project cost -- or 15.3% of the cost of civil works and equipment -- has been envisaged for physical increases. This is reasonable because most of the cost estimates were based on semi-detailed engineering studies and on reliable cost data for similar work under construction in the area. Price contingencies represent about 9.8% of the total project cost or 16.3% of the cost of civil works and equipment, taking into account the domestic inflation and the inflation in countries of likely foreign supplies. Total contingency allowances constitute about 19% of the total project cost.

The foreign exchange component, estimated at 42% of the total project cost, is understood as the sum of direct payments made in foreign currencies for building materials and equipment, consulting services and contractors, plus estimates of the import component embodied in goods, services and royalties that are currently paid for in local currency.

2. Detailed Cost Estimates

Tables 2.1 to 2.14 contain detailed information on base costs, contingency allowances, professional services and cost of land acquisition of the 18 project components. This information has been organized into amounts corresponding to civil works, equipment, foreign exchange component and annual allocations in accordance with the agreed schedule of implementation.

KYONGJU TOURISM PROJECT

BREAKDOWN OF TOTAL PROJECT COST

Cost Figures in millions of Korean Wons (Won million)
Exchange rate: US$1.00 = Won 400

PROJECT ITEMS	Cost of Land Acquisition	Cost of Civil Works	Cost of Equipment	Cost of Prof. Services	Cost of Physical Facilities		Cost of Promotional Expenses	Cost of Project Administration	TOTAL PROJECT COST	
	Won Million	Won Million	Won Million	Won Million	Won Million	US$(000)	Won Million	Won Million	Won Million	US$(000)
I. Dam and Irrigation System	600.4	1,683.8	160.4	285.0	2,729.6	6,824.0			2,729.6	6,824.0
II. Water, Sewerage and Waste Disposal	141.0	876.1	816.3	185.2	2,018.6	5,046.5			2,018.6	5,046.5
III. Electricity	7.1	128.9	928.4	109.2	1,173.6	2,934.0			1,173.6	2,934.0
IV. Roads and Stormwater Drainage	134.7	2,726.0		278.6	3,139.3	7,848.2			3,139.3	7,848.2
V. Tourism Facilities	753.6	3,851.8	519.2	776.8[1/]	5,901.4	14,753.5	300.0	651.7	6,853.1	17,132.8
VI. Telecommunications		56.1	218.0	29.3	303.4	758.5			303.4	758.5
Base Costs	1,636.8	9,322.7	2,642.3	1,664.1	15,265.9	38,164.7	300.0	651.7	16,217.6	40,544.0
Physical Increase		1,424.1	403.6		1,827.7	4,569.2			1,827.7	4,569.2
Price Increase		1,523.0	431.7		1,954.7	4,886.8			1,954.7	4,886.8
Total Contingencies		2,947.1	835.3		3,782.4	9,456.0			3,782.4	9,456.0
GRAND TOTAL	1,636.8	12,269.8	3,477.6	1,664.1	19,048.3	47,620.7	300.0	651.7	20,000.0	50,000.0
Foreign Exchange Component										
Percentage		44.9%	54.5%	29.2%	41.5%	41.5%	87.0%	39.9%	42%	42%
Total		5,506.1	1,893.8	485.2	7,885.1	19,712.7	261.0	253.9	8,400.0	21,000.0
Proceeds of the Loan										
% of Expenditures to be Financed		55.0%	67.2%	55.0%					50%	50%
Amount of Loan Allocated		6,748.0	2,337.0	915.0	10,000.0	25,000.0			10,000.0	25,000.0

1/ Includes the Cheju feasibility study.

November, 1973

ANNEX I
Table T-1

ANNEX 5
TABLE T.2

KOREA: KYONGJU TOURISM PROJECT
BREAKDOWN OF COSTS BY PROJECT ITEMS

Exchange Rate: US$1.00 = Won 400

Code	Items	Civil Works Won (million)	Equipment Won (million)	Contingencies Won (million)	Profess. Services Won (million)	Land Acquisition Won (million)	TOTAL COST Won (million)	TOTAL COST US$(000)	F.Exch.Comp. Won (million)	Year I	Year II	Year III	Year IV
A	Roads and Bridges	2,526.0		719.8	258.0	134.7	3,638.5	9,096.4	1,351.5	951.2	1,494.7	1,033.1	159.5
B	Duk-Dong Dam & Irrigation System	1,683.8	160.4	585.8	285.0	600.4	3,315.4	8,288.4	1,462.8	1,003.0	978.2	926.0	408.2
C	Water Supply Systems	403.7	458.3	257.7	103.5	20.0	1,243.2	3,107.9	677.4	411.9	486.7	269.6	75.0
D	Sewerage Systems	472.4	306.6	285.0	81.7	100.0	1,245.8	3,114.5	482.6	284.9	675.1	180.7	105.1
E	Solid Waste Disposal		51.4	16.3		21.0	88.7	221.7	38.3	21.0	67.7		
F	Environmental Sanitation		17.8	5.6			23.4	58.6	13.3		23.4		
G	Storm Water Drainage	200.0		57.3	20.5		277.8	694.4	88.4	71.8	180.0	26.0	
H	Electricity	128.9	928.4	314.2	109.2	7.1	1,487.8	3,719.5	803.6	364.5	839.2	155.7	128.4
I	Telecommunications	56.1	217.9	93.1	29.4		396.5	991.2	294.8	9.8	247.7	101.1	37.9
J	Earth Works, Bomun Lake	219.0		70.1	22.0		311.1	777.8	154.5	155.1	126.5	29.5	
K	Water Works, Bomun Lake	202.0		64.6	20.4		287.0	717.5	91.5	143.5	116.2	27.3	
L	Community & Recreational Facilities	1,665.0	309.7	662.9	210.7		2,848.3	7,120.7	1,107.8	70.2	1,643.0	879.3	255.8
M	Golf Course	435.5	17.8	136.7	47.0		637.0	1,592.5	271.3	192.3	259.6	134.6	50.5
N	Club House	89.2	22.3	34.1	11.6		157.2	393.0	88.3	3.9	93.2	45.6	14.5
O	Landscaping	662.9	27.5	239.0	74.3		1,003.7	2,509.4	261.9	210.4	394.8	276.3	122.2
P	Improvement of Existing Villages	285.1	23.8	95.6	32.2	8.6	445.3	1,113.3	199.5	99.4	214.2	91.7	40.0
Q	Silla Village Remodelling	35.2		30.5	3.9		69.6	174.1	33.4	14.1	34.4	14.7	6.4
R	Hotel School	257.9	100.4	114.0	194.7	10.0	677.0	1,692.4	364.2	121.4	298.6	184.3	72.7
S	Promotion						300.0	750.0	261.0	75.0	75.0	75.0	75.0
T	Project Administration						651.7	1,629.2	253.9	130.3	195.5	195.6	130.3
U	Cheju-Do Feasibility Study				160.0		160.0	400.0	100.0		160.0		
Y	Land Acquisition, Bomun Lake Site					735.0	735.0	1,837.5		735.0			
	GRAND TOTAL	9,322.7	2,642.3	3,782.4	1,664.1	1,636.8	20,000.0	50,000.0	8,400.0	5,068.7	8,603.7	4,646.1	1,681.5

November, 1973

KOREA: KYONGJU TOURISM PROJECT

BREAKDOWN OF COSTS BY EXECUTING AGENCIES

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won (million)	Equipment Won (million)	Contingencies Won (million)	Professional Services Won (million)	Land Acquisition Won (million)	TOTAL COST Won (million)	TOTAL COST US$ (000)	F. Exch. Comp. Won (million)	Year I Won (million)	Year II Won (million)	Year III Won (million)	Year IV Won (million)
	KYONGJU DEVELOPMENT OFFICE (KDO/KTA)												
A.	Roads and Bridges	2,526.0		719.8	258.0	134.7	3,638.5	9,096.4	1,351.5	951.2	1,494.7	1,033.1	159.5
F.	Environmental Sanitation, Bomun Lake		17.8	5.6			23.4	58.6	13.3		23.4		
G.	Stormwater Drainage, Bomun Lake	200.0		57.3	20.5		277.8	694.4	88.4	71.8	180.0	26.0	
J.	Earthworks, Bomun Lake	219.0		70.1	22.0		311.1	777.8	154.5	155.1	126.5	29.5	
K.	Waterworks, Bomun Lake	202.0		64.6	20.4		287.0	717.5	91.5	143.5	116.2	27.3	
L.	Community & Recreational Facilities	1,665.0	309.7	662.9	210.7		2,848.3	7,120.7	1,107.8	70.2	1,643.0	879.3	255.8
M.	Golf Course	435.5	17.8	136.7	47.0		637.0	1,592.5	271.3	192.3	259.6	134.6	50.5
N.	Club House	89.2	22.3	34.1	11.6		157.2	393.0	88.3	3.9	93.2	45.6	14.5
Ø.	Landscaping	662.9	27.5	239.0	74.3		1,003.7	2,509.4	261.9	210.4	394.8	276.3	122.2
R.	Hotel School	257.9	100.4	114.0	194.7	10.0	677.0	1,692.4	364.2	121.4	298.6	184.3	72.7
S.	Promotion						300.0	750.0	261.0	75.0	75.0	75.0	75.0
T.	Project Administration						651.7	1,629.2	253.9	130.3	195.5	195.6	130.3
U.	Cheju-Do Feasibility Study				160.0		160.0	400.0	100.0		160.0		
Y.	Land Acquisition (Bomun Lake Site)					735.0	735.0	1,837.5		735.0			
	Sub-Total	6,257.5	495.5	2,104.1	1,019.2	879.7	11,707.7	29,269.4	4,407.6	2,860.1	5,060.5	2,906.6	880.5
	CITY OF KYONGJU MUNICIPAL GOVERNMENT (KCG)												
C.	Water Supply Systems	403.7	458.3	257.7	103.5	20.0	1,243.2	3,107.9	677.4	411.9	486.7	269.6	75.0
D.	Sewerage Systems	472.4	306.6	285.1	81.7	100.0	1,245.8	3,114.5	482.6	284.9	675.1	180.7	105.1
E.	Solid Waste Disposal		51.4	16.3		21.0	88.7	221.7	38.3	21.0	67.7		
P.	Improvement of Existing Villages	285.1	23.8	95.6	32.2	8.6	445.3	1,113.3	199.5	99.4	214.2	91.7	40.0
Q.	Silla Village Remodelling	35.2		30.5	3.9		69.6	174.1	33.4	14.1	34.4	14.7	6.4
	Sub-Total	1,196.4	840.1	685.2	221.3	149.6	3,092.6	7,731.5	1,431.2	831.3	1,478.1	556.7	226.5
	AGRICULTURAL DEVELOPMENT CORP. (ADC)												
B.	Duck-Dong Dam & Irrigation System	1,683.8	160.4	585.8	285.0	600.4	3,315.4	8,288.4	1,462.8	1,003.0	978.2	926.0	408.2
	KOREAN ELECTRICAL COMPANY (KECO)												
H.	Electricity	128.9	928.4	314.2	109.2	7.1	1,487.8	3,719.5	803.6	364.5	839.2	155.7	128.4
	MINISTRY OF COMMUNICATIONS (MC)												
I.	Telecommunications	56.1	217.9	93.1	29.4		396.5	991.2	294.8	9.8	247.7	101.1	37.9
	GRAND TOTAL	9,322.7	2,642.3	3,782.4	1,664.1	1,636.8	20,000.0	50,000.0	8,400.0	5,068.7	8,603.7	4,646.1	1,681.5

November, 1973

ANNEX 1
Table 1.3

KOREA: KYONGJU TOURISM PROJECT

SCHEDULE OF EXPENDITURES BY PROJECT ITEMS 1/

(US$ 000)

CODE		Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	TOTAL 1/	
A.	Roads and Bridges	173	347	520	695	709	1,064	1,064	710	736	736	491	491	126	126	126		8,114	A.
B.	Dam and Irrigation			381	382	448	448	672	673	640	640	426	426	313	313	313		6,075	B.
C.	Water Supply	134	134	238	320	360	276	276	240	214	214	214				179		2,799	C.
D.	Sewerage System		58	105	210	402	402	402	402	278	151				250			2,660	D.
E.	Solid Waste Disposal								169									169	E.
F.	Environmental Sanitation								59									59	F.
G.	Stormwater Drainage			63	90	129	129	100	71				61					643	G.
H.	Electricity			270	492	502	502	502	486	185	185				305			3,429	H.
I.	Telecommunications					148	163	163	113	113	128				90			918	I.
J.K.	Earth and Water Works			338	338	303	276				134							1,389	J.K.
L.	Community & Rec. Facilities					755	755	880	1,510	800	532	532	220			610		6,594	L.
M.N.	Golf Course & Clubhouse			149	270	328	228	142	142	190	190	46		31	123			1,839	M.N.
Ø.	Landscaping		207	113	120	235	235	235	235	235	195	148	78	150	138			2,324	Ø.
P.Q.	Village Improvement			111	111	111	111	188	182	109	109	33				111		1,176	P.Q.
R.	Hotel School			82	82	148	148	148	148	105	105	105				110		1,181	R.
S.	Promotion		50	50	50	50	50	60	60	60	60	60	60	50	50	40		750	S.
T.	Project Adminis.	80	80	80	80	123	123	124	124	124	124	124	123	80	80	80	80	1,629	T.
U.	Cheju-Do Study					100	100	100	100									400	U.
X.	Professional Services	550	550	240	240	240	240	240	240	240	240	240	240	90	85	85		3,760	X.
	Total by Quarter	937	1,426	2,740	3,480	5,091	5,250	5,296	5,664	4,029	3,743	2,419	1,699	840	1,560	1,654	80	43,908 1/	
	Total Year I				8,583														
	Total Year II								21,301										
	Total Year III												11,890						
	Total Year IV																4,134		
	Total (Accumulative)				8,583				29,884				41,774				45,908		

1/ Excludes Land Acquisition

November, 1973

KOREA: KYONGJU TOURISM PROJECT

SCHEDULE OF EXPENDITURES BY EXECUTING AGENCIES 1

(US$ 000)

CODE		Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	TOTAL	
	KYONGJU DEVELOPMENT OFFICE (KDO/KTA)																		
A.	Roads and Bridges	173	347	520	695	709	1,064	1,064	710	736	736	491	491	126	126	126		8,114	A.
F.	Environmental Sanitation, Bomun Lake								59									59	F.
G.	Stormwater Drainage, Bomun Lake			63	90	129	129	100	71				61					643	G.
J.K.	Earth- and Waterworks, Bomun Lake			338	338	303	276				134							1,389	J.K.
L.	Community and Recreational Facilities					755	755	880	1,510	800	532	532	220			610		6,594	L.
M.N.	Golf Course and Clubhouse			149	270	328	228	142	142	190	190	46		31	123			1,839	M.N.
Ø.	Landscaping		207	113	120	235	235	235	235	235	195	148	78	150	138			2,324	Ø.
R.	Hotel School			82	82	148	148	148	148	105	105	105				110		1,181	R.
S.	Promotion		50	50	50	50	50	60	60	60	60	60	60	50	50	40		750	S.
T.	Project Administration	80	80	80	80	123	123	124	124	124	124	124	123	80	80	80	80	1,629	T.
U.	Cheju-Do Feasibility Study					100	100	100	100									400	U.
X.	Professional Services	303	303	146	146	124	122	123	126	131	131	180	195	61	12	42		2,145	X.
	Total by Quarter	556	987	1,541	1,871	3,004	3,230	2,976	3,285	2,381	2,207	1,686	1,228	498	529	1,008	80	27,067	
	Total Year I				4,955														
	Total Year II								12,495										
	Total Year III												7,502						
	Total Year IV																2,115		
	Total, KDO/KTC (Accumulative)				4,955				17,450				24,952				27,067		
	CITY OF KYONGJU MUNICIPAL GOVERNMENT (KCG)																		
C.	Water Supply Systems	134	134	238	320	360	276	276	240	214	214	214				179		2,799	C.
D.	Sewerage Systems		58	105	210	402	402	402	402	278	151				250			2,660	D.
E.	Solid Waste Disposal								169									169	E.
P.Q.	Improvement of Existing Villages			111	111	111	111	188	182	109	109	33				111		1,176	P.Q.
X.	Professional Services	105	105	37	37	37	37	37	37	37	37	15			20	15		556	X.
	Total by Quarter	239	297	491	678	910	826	903	1,030	638	511	262			270	305		7,360	
	Total Year I				1,705														
	Total Year II								3,669										
	Total Year III												1,411						
	Total Year IV																375		
	Total, KCG (Accumulative)				1,705				3,374				6,785				7,360		
	AGRICULTURAL DEVELOPMENT CORP. (ADC)																		
B.1	Duck-Dong Dam			381	382	347	347	521	521	171	171	114	114	44	44	44		3,201	B.1
B.2	Irrigation System					101	101	151	152	469	469	312	312	269	269	269		2,874	B.2
X.	Professional Services	84	84	37	37	51	51	51	51	46	46	45	45	29	28	28		713	X.
	Total by Quarter	84	84	418	419	499	499	723	724	686	686	471	471	342	341	341		6,788	
	Total Year I				1,005														
	Total Year II								2,445										
	Total Year III												2,314						
	Total Year IV																1,024		
	Total, ADC (Accumulative)				1,003				3,450				5,764				6,788		
	KOREA ELECTRICAL COMPANY (KECO)																		
H.	Electricity			270	492	502	502	502	486	185	185				305			3,429	H.
X.	Professional Services	46	46	20	20	20	21	20	20	20	20				20			273	X.
	Total by Quarter	46	46	290	512	522	523	522	506	205	205				325			3,702	
	Total Year I				894														
	Total Year II								2,073										
	Total Year III												410						
	Total Year IV																325		
	Total KECO (Accumulative)				894				2,967				3,377				3,702		
	MINISTRY OF COMMUNICATIONS (MC)																		
I.	Telecommunications					148	163	163	113	113	128				90			918	I.
X.	Professional Services	12	12			8	9	9	6	6	6				5			73	X.
	Total by Quarter	12	12			156	172	172	119	119	134				95			991	
	Total Year I				24														
	Total Year II								619										
	Total Year III												253						
	Total Year IV																95		
	Total, MC (Accumulative)				24				643				896				991		

ANNEX I
Table 1.5

1/ Excludes Land Acquisition

November, 1973

KOREA: KYONGJU TOURISM PROJECT

SCHEDULE OF EXPENDITURES BY EXECUTING AGENCIES II[1/]

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
KYONGJU DEVELOPMENT OFFICE (KDO/KTA)	556	987	1,541	1,871	3,004	3,230	2,976	3,285	2,381	2,207	1,686	1,228	498	529	1,008	80
Water & Sewerage Department City of Kyongju Municipal Government (KCG)	239	297	491	678	910	826	903	1,030	638	511	262			270	305	
Agricultural Development Corporation (ADC)	84	84	418	419	499	499	723	724	686	686	471	471	342	341	341	
Korea Electrical Company (KECO)	46	46	290	512	522	523	522	506	205	205				325		
Ministry of Communications (MC)	12	12			156	172	172	119	119	134				95		
Sub-Total by Quarter	937	1,426	2,740	3,480	5,091	5,250	5,296	5,664	4,029	3,743	2,419	1,699	840	1,560	1,654	80
Total Year I				8,583												
Total Year II								21,301								
Total Year III												11,890				
Total Year IV																4,134
Total (Accumulative)				8,583				29,884				41,774				45,908[1/]

1/ Excludes Land Acquisition

November, 1973

KOREA: KYONGJU TOURISM INFRASTRUCTURE PROJECT

CONTINGENCY ALLOWANCES

	Land Acquisition		Civil Works		Equipment		Professional Services		Promotional Expenses		Project Administration		TOTAL
	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	
Allowances for Physical Increase			15.27%		15.27%								
Allowances for Price Increase			16.34%		16.34%								
Total Project Cost before Contingencies (US$ millions)	4.09		12.82	10.49	2.99	3.61	2.95	1.21	0.10	0.65	0.99	0.64	40.54
Allowances for Physical Increase (US$ millions)			1.97	1.59	0.47	0.54							4.57
Sub Total (US$ millions)	4.09		14.79	12.08	3.46	4.15	2.95	1.21	0.10	0.65	0.99	0.64	45.11
Allowances for Price Increase (US$ millions)			2.12	1.69	0.50	0.58							4.89
TOTAL, Including Contingencies	4.09		16.91	13.77	3.96	4.73	2.95	1.21	0.10	0.65	0.99	0.64	50.00

November, 1973

ANNEX I
Table 1.7

KOREA: KYONGJU TOURISM PROJECT

COSTS OF ROADS AND BRIDGES

Exchange Rate: US$ 1.00 = Won 400

CODE		Earthworks Won (000)	Pavement Won(000)	Drainage Won(000)	Bridges Won(000)	Lighting Won(000)	Others 1/ Won(000)	TOTAL COST Won(000)	TOTAL COST US$	F. Exchange Comp. Won(000)	Year I Won(000)	Year II Won(000)	Year III Won(000)	Year IV Won(000)
. A	ROADS AND BRIDGES													
A.1.0	Access to Historical Monuments							(1,276,504)	(3,191,260)			(517,250)	(636,114)	(123,140)
A.1.1	Yongchi Road (1.38 km)	7,090	13,909	2,013			8,608	31,620				28,458	3,162	
A.1.2	Koenung Road (0.56 km)	1,084	5,746	2,086			4,564	13,480				12,132	1,348	
A.1.3	Namsan Road (14.10 km)	308,735	209,808	86,648	199,179		148,950	953,320				476,660	381,328	95,332
A.1.4	Bobul Road (7.12 km)	68,560	62,186	51,729	39,295		56,314	278,084					250,276	27,808
A.2.0	Bomun Lake Development Roads							(1,249,471)	(3,123,677)		(563,940)	(560,584)	(124,947)	
A.2.1	Access Road (5.71 km) 2/	87,773	98,570	38,542	9,144	14,616	58,499	307,144			184,286	92,144	30,714	
A.2.2	Ring Road (6.38 km)	98,225	110,654	43,132	130,232	39,453	191,560	613,256			245,302	306,628	61,326	
A.2.3	Boduck Road (1.83 km)	24,255	13,897	3,026			13,282	54,460			24,507	24,507	5,446	
A.2.4	Streets and Secondary Roads (11.98 km)	8,522	76,680		99,318	62,493	27,598	274,611			109,845	137,305	27,461	
	Sub total before Contingencies	604,244	591,450	227,176	477,168	116,562	509,375	2,525,975	6,314,937	991,536	563,940	1,077,834	761,061	123,140
	Contingencies:							(719,812)	(1,799,530)	(282,558)	(129,988)	(341,404)	(220,036)	(28,384)
	Physical Increase (15%)							378,896	947,240	148,730	84,591	161,675	114,159	18,471
	Price Increase							340,916	852,290	133,828	45,397	179,729	105,877	9,913
	Professional Services							(258,021)	(645,053)	(77,406)	(122,567)	(75,454)	(52,016)	(7,984)
	Final Engineering & Tender documents 3/							86,007	215,018	25,802	86,007			
	Supervision							172,014	430,035	51,604	36,560	75,454	52,016	7,984
	Land Acquisition 2/							(134,740)	(336,850)					
	Yongchi Road							7,060	17,650					
	Koenung Road							3,190	7,975					
	Namsan Road							46,960	117,400					
	Bobul Road							35,510	88,775					
	Access Road to Bomun Lake							37,525	93,812					
	Boduck Road (50% only)							4,495	11,238					
	TOTAL							3,638,548	9,096,370	1,351,500	(37.14%)			

1/ Includes landscaping, signs and overhead
2/ Not to be financed by the Loan
3/ To be retroactively financed except for Won 10,455,182, representing final design of the access road.

November, 1973

ANNEX I
Table 1.2

ANNEX 1
Table 2.2

KOREA: KYONGJU TOURISM PROJECT

COSTS OF DUCK-DONG DAM AND IRRIGATION SYSTEM

Exchange Rate: US$ 1.00 = Won 400

Code		Civil Works Won (000)	Equipment Won (000)	TOTAL COST Won (000)	TOTAL COST US$	F.Exch.Comp. Won (000)	Year I Won (000)	Year II Won (000)	Year III Won (000)	Year IV Won (000)
B.	DAM AND IRRIGATION SYSTEM									
B.1.0	Duck-Dong Dam	(993,939)	(1,800)	(995,739)	(2,489,347)	(517,000)	(253,457)	(538,533)	(164,999)	(38,750)
B.1.1	Dam Embankment	363,400	600	364,000	910,000	251,000	46,800	187,200	93,600	36,400
B.1.2	Spillway	149,000		149,000	372,500	103,000		134,100	14,900	
B.1.3	Bomun Lake Outlet	22,300	1,200	23,500	58,750	16,200		10,575	10,575	2,350
B.1.4	Relocation of Road to Kampo (4.04 km)	211,256		211,256	528,140	63,400	95,065	95,065	21,126	
B.1.5	Duck-Dong North Road (2.55 km)	102,720		102,720	256,800	30,800	46,224	46,224	10,272	
B.1.6	Boduck Road (1.83 km)	54,460		54,460	136,150	16,300	24,507	24,507	5,446	
B.1.7	Bridges (5), item B.1.4	90,803		90,803	227,007	36,300	40,861	40,862	9,080	
B.2.0	Irrigation System	(689,800)	(158,600)	(848,400)	(2,121,000)	(547,870)		(156,585)	(453,375)	(238,440)
B.2.1	Intake Tower	20,800	2,200	23,000	57,500	16,000		10,350	10,350	2,300
B.2.2	Bulguk Outlet Tunnel	187,100	3,400	190,500	476,250	131,800		85,725	85,725	19,050
B.2.3	Main Canal	97,900	153,000	250,900	627,250	158,150		60,510	165,300	25,090
B.2.4	Land Consolidation	384,000		384,000	960,000	241,920			192,000	192,000
	Subtotal before Contingencies	1,683,739	160,400	1,844,139	4,610,347	1,064,870	253,457	695,118	618,374	277,190
	Contingencies:			(585,817)	(1,464,543)	(341,078)	(51,908)	(201,063)	(234,568)	(98,278)
	Physical Increase			232,330	580,825	143,033	31,931	87,573	77,905	34,921
	Price Increase (7% p.a.)			353,487	883,718	198,045	19,977	113,490	156,663	63,357
	Professional Services:			(285,022)	(712,555)	(56,810)	(97,240)			
	Final Engineering & Tender Documents 1/			67,322	168,305	13,460	67,322			
	Supervision and M. & O. during Construction			217,700	544,250	43,350	29,918	82,052	72,993	32,737
	Land Acquisition: 2/			(600,400)	(1,501,000)		(600,400)			
	Duck-Dong Lake Bed			500,400	1,251,000		500,400			
	Irrigation Canal			40,000	100,000		40,000			
	Land Consolidation			60,000	150,000		60,000			
	TOTAL			3,315,378	8,288,445	1,462,758 (44.1%)	1,003,005	978,233	925,935	408,205

1/ To be retroactively financed.
2/ Not to be financed by the Loan.

KOREA: KYONGJU TOURISM PROJECT

COST OF WATER SUPPLY SYSTEMS

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won(000)	Equipment Won(000)	TOTAL COST Won(000)	TOTAL COST US$	F.Exch.Comp. Won(000)	Year I Won(000)	Year II Won(000)	Year III Won(000)	Year IV Won(000)
C.	WATER SUPPLY SYSTEMS									
C.1.0	Bomun Lake Water Supply	(259,600)	(319,400)	(579,000)	(1,447,500)	(327,714)	(86,850)	(260,550)	(173,700)	(57,900)
C.1.1	Raw Water Pipeline	8,400	29,600	38,000			5,700	17,100	11,400	3,800
C.1.2	Treatment Plant	129,600	110,400	240,000			36,000	108,000	72,000	24,000
C.1.3	Transmission Pipeline	42,960	152,200	195,160			29,274	87,822	58,548	19,516
C.1.4	Distribution Pipeline	45,640	27,200	72,840			10,926	32,778	21,852	7,284
C.1.5	Service Reservoir	33,000		33,000			4,950	14,850	9,900	3,300
C.2.0	City of Kyongju Water Supply	(144,150)	(138,850)	(283,000)	(707,500)	(160,178)	(181,669)	(92,260)	(9,071)	
C.2.1	Treatment Plant	90,082	71,200	161,282			145,154	16,128		
C.2.2	Distribution Pipeline	12,604	44,650	57,254			17,176	34,353	5,725	
C.2.3	Service Reservoir	33,464		33,464			10,039	20,079	3,346	
C.2.4	Meter Shop	8,000	9,000	17,000			5,100	11,900		
C.2.5	Laboratory		4,000	4,000			1,200	2,800		
C.2.6	Vehicles		10,000	10,000			3,000	7,000		
	Sub-Total before Contingencies:	403,750	458,250	862,000	2,155,000	487,892	268,519	352,810	182,771	57,900
	Contingencies:			(257,692)	(644,230)	(145,854)	(61,894)	(109,361)	(73,091)	(13,346)
	Physical Increase (15%)			129,300	323,250	73,184	40,278	52,921	27,416	8,685
	Price Increase			128,392	320,980	72,670	21,616	56,440	45,675	4,661
	Professional Services:			(103,464)	(258,660)	(43,692)	(61,448)	(24,550)	(13,707)	(3,759)
	Ground Water Exploration 2/			14,328	35,820	3,582	14,328			
	Final Engineering and Tender Documents 2/			29,712	74,280	13,370	29,712			
	Supervision			59,424	148,560	26,740	17,408	24,550	13,707	3,759
	Land Acquisition (Bomun Lake Water Supply) 1/			20,000	50,000					
	TOTAL			1,243,156	3,107,890	677,438	(54.49%)			

ANNEX I
Table 2.3

1/ Not to be financed by the Loan
2/ To be retroactively financed

November, 1973

ANNEX 1
Table 2.4

KOREA: KYONGJU TOURISM PROJECT

COSTS OF SEWERAGE SYSTEMS

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won(000)	Equipment Won(000)	TOTAL COST Won(000)	TOTAL COST US$	F.Exch.Comp. Won(000)	Year I Won(000)	Year II Won(000)	Year III Won(000)	Year IV Won(000)
D.	SEWERAGE SYSTEMS									
D.1.0	Bomun Lake Sewerage System	(113,700)	(85,300)	(199,000)	(497,500)	(63,600)	(29,850)	(119,400)	(29,850)	(19,900)
D.1.1	Sewerage Collecting System	17,200	11,800	29,000			4,350	17,400	4,350	2,900
D.1.2	Outfall Sewer Line	71,000	49,000	120,000			18,000	72,000	18,000	12,000
D.1.3	Sewage Pumping Station	25,500	24,500	50,000			7,500	30,000	7,500	5,000
D.2.0	City of Kyongju Sewerage System	(358,700)	(221,300)	(580,000)	(1,450,000)	(262,800)	(87,000)	(348,000)	(87,000)	(58,000)
D.2.1	Sewage Collecting System	112,000	118,000	230,000			34,500	138,000	34,500	23,000
D.2.2	Outfall Sewer Line	43,700	30,300	74,000			11,100	44,400	11,100	7,400
D.2.3	Relay Pumping Station	13,000	13,000	26,000			3,900	15,600	3,900	2,600
D.2.4	Hwang-Seong Aerated Lagoons	190,000	60,000	250,000		150,300	37,500	150,000	37,500	25,000
	Sub-Total before Contingencies:	472,400	306,600	779,000	1,947,500	326,400	116,850	467,400	116,850	77,900
	Contingencies:			(285,040)	(712,600)	(119,430)	(33,185)	(174,808)	(54,920)	(22,127)
	Physical Increase (20%)			155,800	389,500	65,280	23,370	93,480	23,370	15,580
	Price Increase			129,240	323,100	54,150	9,815	81,328	31,550	6,547
	Professional Services:			(81,741)	(204,353)	(36,783)	(34,847)	(32,924)	(8,904)	(5,066)
	Final Engineering and Tender Documents 1/			27,247	68,118	12,261	27,247			
	Supervision			54,494	136,235	24,522	7,600	32,924	8,904	5,066
	Land Acquisition, City of Kyongju 2/			100,000	250,000					
	TOTAL			1,245,781	3,114,453	482,613	(38.74%)			

1/ To be retroactively financed
2/ Not to be financed by the Loan

November, 1973

KOREA: KYONGJU TOURISM PROJECT

COSTS OF SOLID WASTE DISPOSAL AND ENVIRONMENTAL SANITATION

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won(000)	Equipment Won(000)	TOTAL COST Won(000)	TOTAL COST US$	F.Exch.Comp. Won(000)		Year I Won(000)	Year II Won(000)	Year III Won(000)	Year IV Won(000)
E.	SOLID WASTE DISPOSAL (City of Kyongju)										
E.1.1	Trucks, 6 ton (8)		27,200	27,200					27,200		
E.1.2	Trucks, 4 ton (2)		7,400	7,400					7,400		
E.1.3	Vacuum Trucks, 2 ton (2)		5,300	5,300					5,300		
E.1.4	Tractors (2)		11,500	11,500					11,500		
	Sub-Total before Contingencies:		51,400	51,400	128,500	29,092			51,400		
	Contingencies:			(16,281)	(40,702)	(9,215)			(16,281)		
	Physical Increase (15%)			7,710	19,275	4,364			7,710		
	Price Increase			8,571	21,427	4,851			8,571		
	Land Acquisition 1/			21,000	52,500						
	TOTAL			88,681	221,702	38,307	(43.20%)				
F.	ENVIRONMENTAL SANITATION (Bomun Lake Area)										
F.1.1	Boats (2)		5,000	5,000					5,000		
F.1.2	Spraying Equipment		12,800	12,800					12,800		
	Sub-Total before Contingencies:		17,800	17,800	44,500	10,075			17,800		
	Contingencies:			(5,638)	(14,095)	(3,191)			(5,638)		
	Physical Increase (15%)			2,670	6,675	1,511			2,670		
	Price Increase			2,968	7,420	1,680			2,968		
	TOTAL			23,438	58,595	13,266	(56.60%)				

1/ Not to be financed by the Loan

November, 1973

ANNEX I
Table 2.5

ANNEX I
Table 2.6

KOREA: KYONGJU TOURISM PROJECT
COSTS OF STORMWATER DRAINAGE

Exchange Rate: US$ 1.00 = Won 400

Code		Civil Works Won (000)	Equipment Won (000)	TOTAL COST Won (000)	TOTAL COST US$	Foreign Exchange Component Won (000)	Year I Won (000)	Year II Won (000)	Year III Won (000)	Year IV Won (000)
G.	STORMWATER DRAINAGE (Bomun Lake)									
G.1.1	Box Culverts	46,036		46,036			11,509	29,923	4,604	
G.1.2	Concrete Pipelines	67,830		67,830			16,957	44,090	6,783	
G.1.3	Manholes	9,230		9,230			2,308	5,999	923	
G.1.4	Open Ditches	12,000		12,000			3,000	7,800	1,200	
G.1.5	Other Structures	64,904		64,904			16,226	42,188	6,490	
		200,000		200,000	500,000	64,745	50,000	130,000	20,000	
	Sub-total before Contingencies			(57,312)	(143,280)	(18,554)	(11,525)	(41,177)	(4,610)	
	Contingencies:			30,000	75,000	9,712	7,500	19,500	3,000	
	Physical Increase (15%)			27,312	68,280	8,842	4,025	21,677	1,610	
	Price Increase			(20,457)	(51,143)	(5,115)	(10,229)	(8,864)	(1,364)	
	Professional Services:			6,819	17,048	1,705	6,819			
	Final Engineering & Tender Documents[1/]			13,638	34,095	3,410	3,410	8,864	1,364	
	Supervision			277,769	694,423	88,414	(31.83%)			
	T O T A L									

1/ To be retroactively financed.

November, 1973

KOREA: KYONGJU TOURISM PROJECT

COSTS OF ELECTRICITY

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won (000)	Equipment Won (000)	TOTAL COST Won (000)	TOTAL COST US$	Foreign Exch. Component Won (000)	Year I Won (000)	Year II Won (000)	Year III Won (000)	Year IV Won (000)
H.	ELECTRICITY									
H.1.1	Transmission Line	14,721	51,093	65,814			15,394	37,681	6,581	6,158
H.1.2	Substation	68,900	258,350	327,250			76,544	187,364	32,725	30,617
H.1.3	Distribution System (Bomun)	45,800	618,442	664,242			155,366	380,306	66,424	62,146
	Sub-total before Contingencies	128,921	928,385	1,057,306	2,643,265	598,435	247,304	605,351	105,730	98,921
	Contingencies:			(314,221)	(785,552)	(177,849)	(57,004)	(191,745)	(42,671)	(22,801)
	Physical Increase (15%)			158,596	396,490	89,766	37,096	90,803	15,859	14,838
	Price Increase			155,625	389,062	88,083	19,908	100,942	26,812	7,963
	Professional Services:			(109,164)	(272,910)	(27,291)	(53,080)	(42,130)	(7,277)	(6,677)
	Final Engineering & Tender Documents[1]			36,388	90,970	9,097	36,388			
	Supervision			72,776	181,940	18,194	16,692	42,130	7,277	6,677
	Land Acquisition[2]			7,100	17,750					
	TOTAL			1,487,791	3,719,477	803,575 (54.01%)				

1/ To be retroactively financed.
2/ Not to be financed by the Loan.

November, 1973

ANNEX I
Table 2.7

ANNEX I
Table 2.9

KOREA: KYONGJU TOURISM PROJECT
COSTS OF TELECOMMUNICATIONS

Exchange Rate: US$1.00 = Won 400

Code		Civil Works (Won (000)	Equipment Won (000)	TOTAL COST Won (000)	TOTAL COST US$	Foreign Exchange Component Won (000)	Year I Won (000)	Year II Won (000)	Year III Won (000)	Year IV Won (000)
I.	TELECOMMUNICATIONS 1/									
I.1.1.	Telephone Lines	49,495	88,135	137,630				89,460	34,407	13,763
I.1.2	Telegraph Facilities	490	5,933	6,423				4,175	1,606	642
I.1.3	Telex Facilities	560	7,240	7,800				5,070	1,950	780
I.1.4	Fax Facilities		1,200	1,200				1,080	120	
I.1.5	S.T.D. Facilities	5,560	115,440	121,000				78,650	30,250	12,100
	Sub-total before Contingencies	56,105	217,948	274,053	685,133	220,080		178,435	68,333	27,285
	Contingencies:			(93,083)	(232,708)	(74,749)		(56,519)	(27,921)	(8,643)
	Physical Increase (15%)			41,108	102,770	33,012		26,765	10,250	4,093
	Price Increase			51,975	129,938	41,737		29,754	17,671	4,550
	Professional Services			(29,343)	(73,357)		(9,781)	(12,715)	(4,891)	(1,956)
	Final Engineering & Tender Documents			9,781	24,452		9,781			
	Supervision			19,562	48,905			12,715	4,891	1,956
	TOTAL			396,479	991,198	294,829 (74.36%)				

1/ Not to be financed by the Loan.

November, 1973

KOREA: KYONGJU TOURISM PROJECT

COSTS OF BOMUN LAKE EARTHWORKS AND WATERWORKS

Exchange Rate: U.S. $ 1.00 = Won 400

Code		Civil Works Won (000)	Equipment Won (000)	TOTAL COST Won (000)	TOTAL COST US$	Foreign Exch. Component Won (000)	Year I Won (000)	Year II Won (000)	Year III Won (000)	Year IV Won (000)
J.	EARTHWORKS	(219,000)		(219,000)	(547,500)	(115,210)	(109,500)	(87,600)	(21,900)	
J.1.1	Area 'A'	159,000		159,000			109,500	33,600	15,900	
J.1.2	Area 'B'	60,000		60,000				54,000	6,000	
K.	WATERWORKS	(202,000)		(202,000)	505,000	(63,090)	(101,000)	(80,800)	(20,200)	
K.1.1	River improvement	84,000		84,000			42,000	33,600	8,400	
K.1.2	Dredging & Retaining Wall	118,000		118,000			59,000	47,200	11,800	
	Subtotal (J & K) before Contingencies	421,000		421,000	1,052,500	178,300	210,500	168,400	42,100	
	Contingencies:			(134,720)	(336,800)	(57,056)	(59,782)	(62,982)	(11,956)	
	Physical Increase (20%)			84,200	210,500	35,660	42,100	33,680	8,420	
	Price Increase			50,520	126,300	21,396	17,682	29,302	3,536	
	Professional Services:			(42,438)	(106,095)	(10,610)	(28,292)	(11,317)	(2,829)	
	Final Engineering & Tender Documents			14,146	35,365	3,537	14,146			
	Supervision			28,292	70,730	7,073	14,146	11,317	2,829	
	T O T A L			598,158	1,495,395	245,966 (41.12%)				

1/ To be retroactively financed.

November, 1973

ANNEX I
Table 2.9

ANNEX I
Table 2.10

KOREA: KYONGJU TOURISM PROJECT

COSTS OF COMMUNITY AND RECREATIONAL FACILITIES

Exchange Rate: US$ 1.00 = Won 400

Code		Site Improvement W (000)	Construction W (000)	FF & E 1/ W (000)	TOTAL COST W(000)	TOTAL COST US$	F.Ex.Comp. W(000)	Year I W(000)	Year II W (000)	Year III W (000)	Year IV W(000)
L	COMMUNITY & RECREATIONAL FACILITIES										
L.1.0	Amenity Core	(359,820)	(727,400)	(88,260)	(1,175,480)	(2,938,700)	(424,647)		(705,288)	(352,644)	(117,548)
L.1.1	Tourism Center(2,024 m2)	45,540	151,800	45,540	242,880				145,728	72,864	24,288
L.1.2	Day Care Center & Play Ground(368m2)	11,040	27,600	5,520	44,160				26,496	13,248	4,416
L.1.3	Shops (6,000 m2)	135,000	450,000	22,500	607,500				364,500	182,250	60,750
L.1.4	Performing & Gaming (1,400 m2)	29,400	98,000	14,700	142,100				85,260	42,630	14,210
L.1.5	Landscaping & Parking	138,840			138,840				83,304	41,652	13,884
L.2.0	Service Core	(37,330)	(109,500)	(127,295)	(274,125)	(685,312)	(152,717)		(164,476)	(82,237)	(27,412)
L.2.1	Administration Building(928 m2)	13,920	69,600	22,845	106,365				63,820	31,909	10,636
L.2.2	Fire Dept. & Police Station(532 m2)	7,960	39,900	104,450	152,310				91,386	45,693	15,231
L.2.3	Landscaping & Parking	15,450			15,450				9,270	4,635	1,545
L.3.0	Other Facilities	(133,841)	(297,093)	(94,096)	(525,030)	(1,312,575)	(227,777)		(315,018)	(157,509)	(52,503)
L.3.1	Marina (966 m2)	21,735	72,450	21,735	115,920				69,552	34,776	11,592
L.3.2	Bus Terminal (638 m2)	7,177	47,850	9,570	64,597				38,758	19,379	6,460
L.3.3	Service Station (857 m2)	7,713	51,420	32,200	91,333				54,800	27,400	9,133
L.3.4	Boat Repair Facilities (210 m2)	1,890	12,600	2,520	17,010				10,206	5,103	1,701
L.3.5	Maintenance Shed (960 m2)	8,640	57,600	11,520	77,760				46,656	23,328	7,776
L.3.6	Heliport	2,860			2,860				1,716	858	286
L.3.7	Tennis Club (735 m2)& Tennis Courts(10)	48,076	55,173	16,551	119,800				71,880	35,940	11,980
L.3.8	Parking Facilities	35,750			35,750				21,450	10,725	3,575
	Subtotal before Contingencies	530,991	1,133,993	309,651	1.974,635	4,936,587	805,141		1,184,782	592,390	197,463
	Contingencies				(662,934)	(1,657,335)	(270,306)		(375,279)	(242,139)	(45,516)
	Physical Increase (15%)				296,195	740,488	120,771		177,717	88,858	29,620
	Price Increase				366,739	916,847	149,535		197,562	153,281	15,896
	Professional Services:				(210,723)	(526,808)	(32,355)	(70,241)	(82,940)	(44,740)	(12,802)
	Final Design & Tender Documents 2/				70,241	175,603	10,785	70,241			
	Supervision				140,482	351,205	21,570		82,940	44,740	12,802
	TOTAL				2,848,292	7,120,730	1,107,802	(38.89%)			

1/ Includes finishing and movable furniture and equipment. 2/ To be retroactively financed.

November, 1973

KOREA: KYONGJU TOURISM PROJECT

COST OF GOLF COURSE & CLUB HOUSE

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won(000)	Equipment Won(000)	TOTAL COST Won(000)	TOTAL COST US$	F.Exch.Comp. Won(000)	Year I Won(000)	Year II Won(000)	Year III Won(000)	Year IV Won(000)
M.	GOLF COURSE (18 holes)	(435,462)	(17,800)	(453,262)	(1,133,155)	(190,370)	(136,406)	(187,184)	(90,651)	(39,021)
M.1.1	Preparation and Clearing	5,852		5,852			5,267	585		
M.1.2	Earth Works	204,000		204,000			91,800	91,800	20,400	
M.1.3	Finish Grading & Shaping	4,400		4,400			1.980	1,980	440	
M.1.4	Turfs	78,000		78,000				26,000	26,000	26,000
M.1.5	Greens, Tees and Bunkers	30,840		30,840			12,336	7,710	7,710	3,084
M.1.6	Irrigation System	28,630	1,400	30,030			4,504	15,016	7,507	3,003
M.1.7	Drainage System	30,160		30,160			7,737	9,627	9,628	3,016
M.1.8	Foot Paths	11,480		11,480				5,166	5,166	1,148
M.1.9	Start House & Rest Rooms	3,400		3,400					3,060	340
M.1.10	Landscaping	24,300		24,300			2,430	9,720	9,720	2,430
M.1.11	Maintenance Equipment Shed	14,400	16,400	30,800			10,200	19,580	1,020	
N.	CLUB HOUSE (1,200 sq. m.)	(89,250)	(22,312)	(111,562)	(278,905)	(63,232)		(66,937)	(33,469)	(11,156)
N.1.1	Lobby and Pro-Shop (150 sq. m.)	11,400	4,578	15,978				9,587	4,793	1,598
N.1.2	Cocktail Lounge (60 sq.m.)	4,560	1,230	5,790				3,474	1,737	579
N.1.3	Dining Room (120 seats, 335 sq. m.)	25,460	8,367	33,827				20,296	10,148	3,383
N.1.4	Kitchen and Service Area (355 sq. m.)	26,250	4,790	31,040				18,624	9,312	3,104
N.1.5	Offices (40 sq. m.)	2,960	2,202	5,162				3,097	1,549	516
N.1.6	Locker Rooms and Rest Rooms (200 sq.m.)	14,420	1,145	15,565				9,339	4,670	1,556
N.1.7	Storage Area (60 sq. m.)	4,200		4,200				2,520	1,260	420
	Sub-Total before Contingencies:	524,712	40,112	564,824	1,412,060	253,602	136,406	254,121	124,120	50,177
	Contingencies:			(170,785)	(426,962)	(76,680)	(31,442)	(80,863)	(46,914)	(11,566)
	Physical Increase (15%)			84,724	211,810	38,040	20,461	38,118	18,618	7,527
	Price Increase			86,061	215,152	38,640	10,981	42,745	28,296	4,039
	Professional Services:			(58,581)	(146,453)	(29,290)	(28,370)	(17,812)	(9,146)	(3,253)
	Final Design and Tender Documents 1/			19,527	48,818	9,763	19,527			
	Supervision			39,054	97,635	19,527	8,843	17,812	9,146	3,253
	TOTAL:			794,190	1,985,475	359,572	(45.28%)			

1/ To be retroactively financed

November, 1973

ANNEX 2.11
TABLE 1

ANNEX I
Table 2.12

KOREA: KYONGJU TOURISM PROJECT

COST OF LANDSCAPING

Exchange Rate: US$1.00 = Won 400

Code		Civil Works Won(000)	Equipment Won(000)	TOTAL COST Won(000)	TOTAL COST US$	F. Exch. Comp. Won(000)	Year I Won(000)	Year II Won(000)	Year III Won(000)	Year IV Won(000)
Ø	LANDSCAPING									
Ø.1.0	Landscaping, Bomun Lake Area	(567,652)		(567,652)	(1,419,130)	(102,178)	(104,160)	(209,107)	(168,665)	(85,720)
Ø.1.1	Demolition of Existing Buildings	18,400		18,400			18,400			
Ø.1.2	Roadside Green	67,402		67,402			13,480	47,182	6,740	
Ø.1.3	Park	159,000		159,000			23,850	51,675	51,675	31,800
Ø.1.4	Promenade	106,500		106,500			15,980	39,935	39,935	10,650
Ø.1.5	Reforestation	216,350		216,350			32,450	70,315	70,315	43,270
Ø.2.0	Nursery	(95,290)	(27,500)	(122,790)	(306,975)	(59,258)	(39,122)	(75,594)	(8,074)	
Ø.2.1	Nursery Buildings	38,890		38,890			11,667	23,334	3,889	
Ø.2.2	Seeding	40,950		40,950			12,900	23,955	4,095	
Ø.2.3	Environmental Improvement	14,550		14,550			7,275	7,275		
Ø.2.4	Scenic Areas	900		900			405	405	90	
Ø.2.5	Tools and Equipment		27,500	27,500			6,875	20,625		
	Sub-Total before Contingencies:	662,942	27,500	690,442	1,726,105	161,436	143,282	284,701	176,739	85,720
	Contingencies:			(238,984)	(597,460)	(55,877)	(33,026)	(90,179)	(85,445)	(30,334)
	Physical Increase (15%)			103,566	258,915	24,216	21,492	42,705	26,511	12,858
	Price Increase			135,418	338,545	31,661	11,534	47,474	58,934	17,476
	Professional Services:			(74,328)	(185,820)	(44,597)	(34,065)	(19,931)	(14,140)	(6,192)
	Final Design and Tender Documents 1/			24,776	61,940	14,866	24,776			
	Supervision			49,552	123,880	29,731	9,289	19,931	14,140	6,192
	TOTAL:			1,003,754	2,509,385	261,910	(26.09%)			

1/ To be retroactively financed

November, 1973

KOREA: KYONGJU TOURISM PROJECT

IMPROVEMENT OF EXISTING VILLAGES

Exchange Rate: US$ 1.00 = Won 400

Code		Civil Works W(000)	Equipment W(000)	TOTAL COST W (000)	TOTAL COST US$	F.Exch.Comp. W (000)	Year I W (000)	Year II W (000)	Year III W (000)	Year IV W (000)
P	IMPROVEMENT OF BUK GUN, SON GOK, CHONG DAN AND CHUN GUN VILLAGES	(285,120)	(23,850)	(308,970)	(772,425)	(146,993)	(61,794)	(154,485)	(61,794)	(30,897)
P.1.0	Utilities	(213,720)		(213,720)	(534,300)	(109,120)	(42,744)	(106,860)	(42,744)	(21,372)
P.1.1	Water Supply	64,200		64,200			12,840	32,100	12,840	6,420
P.1.2	Sewerage	47,000		47,000			9,400	23,500	9,400	4,700
P.1.3	Electricity	24,000		24,000			4,800	12,000	4,800	2,400
P.1.4	Telephone	35,000		35,000			7,000	17,500	7,000	3,500
P.1.5	Street Improvement (7.40 km)	43,520		43,520			8,704	21,760	8,704	4,352
P.2.0	Elementary School	(71,400)	(23,850)	(95,250)	(238,125)	(37,873)	(19,050)	(47,625)	(19,050)	(9,525)
P.2.1	Classrooms (6 x 67 m2)	30,150	10,100	40,250			8,050	20,125	8,050	4,025
P.2.2	Multipurpose Room (300 m2)	22,500	7,500	30,000			6,000	15,000	6,000	3,000
P.2.3	Teachers Offices (130 m2)	9,750	3,250	13,000			2,600	6,500	2,600	1,300
P.2.4	Lockers and Toilets (120 m2)	9,000	3,000	12,000			2,400	6,000	2,400	1,200
Q	SILLA VILLAGE REMODELLING									
Q.1.0	Utilities	(35,250)		(35,250)	(88,125)	(15,609)	(7,050)	17,625)	(7,050)	(3,525)
Q.1.1	Water Supply	3,600		3,600			720	1,800	720	360
Q.1.2	Sewerage	5,250		5,250			1,050	2,625	1,050	525
Q.1.3	Electricity	4,500		4,500			900	2,250	900	450
Q.1.4	Telephone	7,500		7,500			1,500	3,750	1,500	750
Q.1.5	Street Improvement (1.20 km)	14,400		14,400			2,880	7,200	2,880	1,440
	Subtotal before Contingencies	320,370	23,850	344,220	860,550	162,602	68,844	172,110	68,844	34,422
	Contingencies			(126,053)	(315,132)	(59,545)	(19,552)	(64,369)	(32,357)	(9,775)
	Physical Increase (20 %)			68,844	172,110	32,520)	13,769	34,422	13,769	6,884
	Price Increase			57,209	143,022	27,025	5,783	29,947	18,588	2,891
	Professional Services:			(36,129)	(90,323)	(10,761)	(16,521)	(12,123)	(5,246)	(2,239)
	Final Engineering and Tender Documents 2/			12,043	30,108	3,585	12,043			
	Supervision			24,086	60,215	7,176	4,478	12,123	5,246	2,239
	Land Acquisition (for school) 1/			8,570	24,425					
	TOTAL			514,972	1,287,430	232,908	(45.23%)			

1/ Not to be financed by the Loan. 2/To be retroactively financed.

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ANNEX I
Table 2.13

KOREA: KYONGJU TOURISM INFRASTRUCTURE PROJECT
COST OF HOTEL SCHOOL

Code	Site Improvement W (000)	Construction W (000)	F.F. & E 1/ W (000)	TOTAL COST W (000)	TOTAL COST US$	F.Exch.Comp. W (000)	Year I W(000)	Year II W (000)	Year III W (000)	Year IV W (000)
R HOTEL SCHOOL										
R.1.0 Hotel Facilities (60 beds)	(15,275)	(127,295)	(69,720)	(212,290)	(530,725)	(120,156)	(31,843)	(106,140)	(53,078)	(21,229)
R.1.1 Guest Rooms (30 rooms x 28m2)	7,560	63,000	12,600	83,160			12,474	41,580	20,790	8,316
R.1.2 Public Areas (65 m2)	585	4,875	2,590	8,050			1,207	4,025	2,013	805
R.1.3 Dining Room (50 seats x 1.70 m2)	765	6,375	34,090	41,230			6,185	20,615	10,307	4,123
R.1.4 Bar Lounge (25 seats x 2.00 m2)	450	3,750	960	5,160			774	2,580	1,290	516
R.1.5 Kitchen & Storage (135 m2)	1,935	16,125	12,580	30,640			4,596	15,320	7,660	3,064
R.1.6 Laundry & Linen Room (45 m2)	755	6,300	4,100	11,155			1,673	5,575	2,792	1,115
R.1.7 General Service Area (220 m2)	1,835	15,300	2,800	19,935			2,990	9,965	4,986	1,994
R.1.8 General Circulation (154 m2)	1,390	11,570		12,960			1,944	6,480	3,240	1,296
R.2.0 Training Facilities (250-300 students)	(12,353)	(102,940)	(30,685)	(145,978)	(364,945)	(82,624)	(21,894)	(72,991)	(36,495)	(14,598)
R.2.1 Classrooms (6 classrooms x 60 m2)	3,024	25,200	5,040	33,264			4,990	16,632	8,316	3,326
R.2.2 Language Laboratories (2 labs.x 48 m2)	922	7,680	4,608	13,210			1,982	6,605	3,302	1,321
R.2.3 Accounting Workshop (1 x 48 m2)	403	3,360	1,680	5,443			816	2,722	1,361	544
R.2.4 Food & Beverage Workshop (1 x 120 m2)	1,152	9,600	3,840	14,592			2,188	7,296	3,648	1,460
R.2.5 Staff Offices & Administration (210 m2)	1,890	15,750	6,300	23,940			3,590	11,971	5,985	2,394
R.2.6 Library (120 m2)	1,008	8,400	2,940	12,348			1,852	6,174	3,087	1,235
R.2.7 Cafeteria (160 seats, 180 m2)	1,512	12,600	5,040	19,152			2,872	9,577	4,788	1,915
R.2.8 Restroom, Lockers, showers (150 m2)	1,350	11,250	1,237	13,837			2,076	6,917	3,460	1,384
R.2.9 General Circulation (130 m2)	1,092	9,100		10,192			1,528	5,097	2,548	1,019
Subtotal before Contingencies	27,628	230,235	100,405	358,268	895,670	202,780	53,737	179,131	89,573	35,827
Contingencies				(113,997)	(284,992)	(64,522)	(12,386)	(56,740)	(36,613)	(8,258)
Physical Increase (15%)				53,740	134,350	30,417	8,060	26,870	13,436	5,374
Price Increase				60,257	150,642	34,105	4,326	29,870	23,177	2,884
Professional Services:				(41,852)	(104,630)	(10,463)	(20,225)	(12,540)	(6,764)	(2,323)
Design & Tender Documents 2/				16,741	41,853	4,185	16,741			
Supervision				25,111	62,777	6,278	3,484	12,540	6,764	2,323
Land Acquisition 3/				10,000	25,000					
Foreign Staff 4/				152,832	382,080	86,416	25,074	50,148	51,342	26,268
TOTAL				676,949	1,692,372	364,181	(53.80%)			

1/ Includes finishing and movable furniture and equipment.
2/ To be retroactively financed. 3/ Not to be financed by the Loan.
4/ Calculated on the basis of 11 man-years of Teacher/Advisor at US$ 35,000 per annum.

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KOREA: KYONGJU TOURISM PROJECT

SCHEDULE OF DISBURSEMENTS
(US$ 000)

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1. Dam and Irrigation				170	165	195	195	290	290	280	280	190	190	140	130	140
2. Water Supply, Sewerage & Solid Waste Disposal			180	170	240	320	290	320	365	230	180	90			110	100
3. Electricity			60	200	360	370	370	365	355	150	150				210	
4. Tourism Facilities			960	960	1,165	1,875	2,015	1,855	2,048	1,480	1,390	1,050	760	320	320	680
5. Feasibility Study						70	70	70	72							
Total by Quarter			1,200	1,500	1,930	2,830	2,940	2,900	3,130	2,140	2,000	1,330	950	460	770	920
Total Year I				2,700												
Total Year II								10,600								
Total Year III												8,600				
Total Year IV																3,100
TOTAL (Accumulative)				2,700				13,300				21,900				25,000

November, 1973

ANNEX 1
Table 3.1

KOREA

APPRAISAL OF THE KYONGJU TOURISM PROJECT

MARKET DEMAND

I. Present Foreign Visitor Traffic to Korea

1. Total foreign visitor arrivals to Korea increased from 67,965 in 1966 to 370,656 in 1972, showing an annual average growth rate of 33% over the period. The growth in 1972 was 59%. The major impetus behind these increases has been the growth in visitor traffic to Korea by Japanese. Through 1970 U.S. visitors were the largest group; since 1971 the Japanese have become by far the most numerous, increasing by 52% per year on the average and more than doubling last year.

Visitors to Korea by Nationality, 1966-72

Nationality	1966		1970		1971		1972		Av. Annual Growth Rate 1966-1972
U.S.A.	30,226	(44%)	55,352	(32%)	58,003	(25%)	63,578	(17%)	15%
Japan	16,873	(25%)	51,711	(30%)	96,531	(41%)	217,287	(59%)	52%
Koreans Resident in Japan	12,005	(18%)	33,797	(19%)	50,350	(22%)	55,280	(15%)	29%
Others	8,861	(13%)	32,475	(19%)	27,911	(12%)	34,511	(9%)	26%
Total	67,965	(100%)	173,335	(100%)	232,795	(100%)	370,656	(100%)	33%
Index	100		255		343		545		-

Source: Ministry of Transportation, Bureau of Tourism , 1973

2. Within the total visitor traffic, vacation travel grew at an even faster pace - an annual average rate of 50% in 1966-72; in 1972, it accounted for 56% of all visitors (and 83% of Japanese visitors) compared with 28% in 1966, while business visitors in the same period declined from 13% to 8% of the total. "Other visitors" showed a relatively high annual growth rate of 42% over the same period, reflecting a greater exchange of citizens and ideas between Koreans and other countries on a non-official level, i.e. in sports, in education, in research, etc.

Visitors to Korea by Purpose, 1966-72

Purpose	1966		1970		1971		1972		Av. Growth Rate 1966-72
Vacation	18,750	(28%)	53,920	(31%)	95,540	(41%)	209,180	(56%)	50%
Business	9,026	(13%)	21,447	(12%)	22,575	(10%)	30,856	(8%)	23%
Official [a/]	19,098	(28%)	26,481	(16%)	27,208	(12%)	31,847	(9%)	9%
Family Visit [b/]	15,379	(23%)	37,880	(22%)	50,518	(22%)	55,107	(14%)	23%
Other [c/]	5,379	(8%)	33,607	(19%)	36,954	(16%)	43,666	(12%)	42%
Total	67,965	(100%)	173,335	(100%)	232,795	(100%)	370,656	(100%)	33%

Source: Ministry of Transportation, Bureau of Tourism , 1973

a/ Including military and diplomatic personnel.

b/ Mainly Koreans resident in Japan.

c/ Includes culture, gymnastics, journalism, research and training, employment, and all others.

3. In spite of distinct seasonal changes in climate in Korea, the tourist flow is fairly even throughout the year, except for the winter months of January and February. More than 90% of tourists to Korea in 1972 came by air, and the rest by sea. The main port of entry for sea travelers to Korea is Pusan, which has a thrice-weekly ferry service linking it to Shimonoseki, Japan. There are plans to further expand this service. In addition, chartered vessels began operating from Kobe and Shimonoseki to Busan in the middle of 1972 and the demand is growing rapidly; 16,000 tourists are expected to come in on these vessels in April-December 1973.

4. According to Bank of Korea data, foreign exchange earnings from tourism amounted to US$ 31.2 million in 1971 and US$ 74.7 million in 1972. Assuming an average five-day stay per visitor to Korea, the average daily expenditure per tourist was about US$ 40. However, these figures may be somewhat on the low side since a 1972 survey by the Kyongju Tourism Development Economic Study Team estimated average daily expenditures by foreign tourists to Korea to be US$ 51 for overnight visitors and US$ 17 for day visitors.

II. Future Foreign Visitor Traffic to Korea

(a) The Japanese Market

5. To evaluate the future development of Korean tourism, it is necessary to assess the current trends in Japanese overseas vacation travel and its prospects.

6. The number of Japanese traveling abroad has been increasing at a remarkable pace, particularly those going abroad on vacation rather than business trips. The number of Japanese who traveled abroad (excluding those going to Okinawa) grew by 42% on an annual average over the period of 1968-1972, reaching 1,392,000 in 1972. Vacation travel from Japan increased much faster than the overall rise, growing almost 60% per annum during the same period. The number of passports issued for vacation trips abroad rose from 46% of the total in 1967 to 85% in 1972 while passports issued for business trips fell from 40% to 12% in the same period. The most popular destination for Japanese tourists were in Asia, particularly Hong Kong, Taiwan and Korea, followed by the Pacific; namely, Hawaii and Guam. The highest growth rate was in travel to Korea, which more than doubled from 1971 to 1972 alone.

7. There are a number of reasons for this marked growth; the most obvious are:

(a) the growth in the real income level of Japanese, combined with the recent revaluation of the Yen, has greatly increased the number of Japanese who can afford to travel abroad;

(b) the amount of free time enjoyed by the average Japanese worker has been increasing; many major business establishments in Japan have adopted the 40-hour week; the average length of paid vacation time is gradually increasing, and the Japanese worker is becoming more like his Western counterpart in that vacations are oftentimes taken abroad;

(c) the active role played by travel agencies in developing a wide spectrum of tours designed to appeal to the greatest number of people with attractive group tour prices and simplification of travel abroad by overcoming the problem of language, hotel arrangements, etc.;

(d) resort areas in Japan have become overcrowded, reaching a saturation point and causing many Japanese to seek vacations out of the country.

8. As a result of these factors, Japanese vacation travelers going abroad have risen from 154,200 in 1968 to almost 1 million in 1972. On the basis of the Japan National Tourist Organization's projection and studies made by the Japan Tourist Association, as well as discussions with the five leading tour operators in Japan, the mission has projected the growth in Japanese vacation travelers going abroad conservatively at 34% p.a. (little more than half the rate realized in the last five years, 1968-1972). On this basis, it is estimated that the number of Japanese vacation travelers will be 1.4 million in 1973 and will increase to 10 million[1/] in 1980.

9. An indication of future Japanese travel abroad may lie in the growth of domestic tourism. A JTA sample survey in 1972 indicated that 87 million trips were made within the country with the number of annual visits averaging 1.9 per traveler and the average stay 2 nights. Consequently, some 45 million inhabitants could afford to make a vacation trip within the country, their average expenditure amounting to US$ 49 per visit or US$ 24.50 per day. If only 20% of these tourists were able to join the ranks of those going abroad on vacation in the next few years, the potential increase in the number of Japanese traveling abroad would be 9 million. The current development of overseas traffic by Japanese thus appears still to be in the primary stage.

10. The travel industry in Japan faces a number of crucial problems, which must be solved if the growing demand for foreign travel by Japanese is to be met. These include the present restrictions on charter flights, the need for expansion of airport and aircraft capacity, and the shortage of tourist accommodations in some popular nearby destinations. Given the pressures within Japan for greater travel abroad, the move towards more chartered flights for Japanese appears irresistible, much like the large chartered flight business in America and Europe. Current arrangements between tour operators and air carriers, both domestic and foreign, are in fact already undermining air policy based on IATA agreements which had restricted charter development. As to expansion of physical facilities, the Government has embarked on a major program for expansion or addition of new international airports. Despite the growth of accommodation in nearby areas, the capacity of such facilities is still inadequate in some areas to accommodate increasing vacation demands from Japan. Japanese investors are responding to the opportunity by building new hotels in such destinations as Korea, Thailand, Indonesia, Hawaii and Guam. Even though in the future Japanese can expect to travel with greater ease to more distant places, for the present the bulk of their travel is likely to be confined to places nearest to home - the Far East, Southeast Asia, Micronesia and the South Pacific.

1/ A comparison with Britain is illuminating. Despite marked differences, the similarities between the highly industrialized, urbanized and relatively affluent island societies of Britain and Japan provide some basis for such a comparison. In 1972, out of the total British population of 52 million, about 8.5 million went abroad on vacation. For a Japanese population exceeding 100 million and with a per capita income substantially above the British, even the projection of 10 million foreign vacationers in 1980 could prove rather conservative.

11. Important among these destinations will be Korea. Relations between Korea and Japan have been checkered by periods of animosity and periods of relatively peaceful and beneficial interaction. The ill-feeling and resentment to which the period of the Japanese annexation of Korea in the first half of this century (1910-1945) gave rise are dissipating and contacts between the two countries have been steadily improving and increasing since the Normalization Treaty signed in 1965. Today, Korea has a number of advantages over other Asian countries competing for the Japanese tourist market:

(i) its relatively low price level;

(ii) its unique cultural and historical remains which predate those in Kyoto and Nara in Japan and which are of interest to the Japanese;

(iii) its proximity to Japan and the low transportation costs involved; and

(iv) the fact that many Koreans, particularly of the older generation, speak Japanese.

12. Japanese tourists to Korea are drawn from several groups: (1) Japanese school groups, who for the same cost involved in traveling from one part of Japan to another, can visit some of the archaelogical remains in Korea; (2) college-age students; (3) those Japanese who have been to such places as Taiwan, Hong Kong, Macao, etc., and who are looking for new nearby places; (4) companies sponsoring trips for their personnel.

13. Korea is being heavily promoted by Japanese tour operators. What makes this important is the fact that 97% of total air tickets sold to Japanese is handled through tour operators (according to a Japan Airlines survey). The price range of typical tour programs for Korea is within the economic reach of Japanese urban workers whose average monthly earnings rose to ¥ 110,000[1/] (US$ 410) in 1972. Following is a comparison of prices for typical Japanese tours to popular destinations:

Destination	Duration	Price for 1973	
		Yen	US$
Hawaii	4 nights/6 days	168,000	634
Guam	4 nights/5 days	106,000	400
Hong Kong/Macao	3 nights/4 days	129,000	487
Korea	3 nights/4 days	85,000	321

1/ Based on the estimated data for 1970, from the Statistical Year Book of 1972, published by Statistics Bureau, Prime Minister's Office.

14. While at the moment travel to Korea by Japanese vacationers is largely confined to package tour groups, in the future many Japanese will probably travel to Korea on their own. The high visibility of Korea as a tourist destination in available tour programs combined with an active advertising program carried on by the airlines and tour agencies will encourage Japanese to go to Korea on their own. This is particularly true of Japanese who have already been there as part of a group.

(b) North American and European Vacation Visitor Traffic

15. The Far East has been visited by comparatively few foreigners in the past; however, the next few years should see a very real growth in the number of vacation visitors from North America and Europe. They will naturally continue to visit already popular places in the Orient, e.g. Hong Kong, Japan, etc. Several factors, however, will broaden the scope of the area visited: (1)more tour operators are offering inclusive tours to Asia including countries which have hitherto had few vacation visitors, e.g. Korea, Philippines, Indonesia, etc.; (2) sometime in the future, it is expected that China will normalize its relations with other countries and will open its doors to the ordinary vacationing tourist; (3) the western tourist who travels has been to countries in Europe and the Americas; his next natural travel goal is Asia. It has become a feasible goal because of the increase in real income, and a reduction in costs of such travel through package tours. For these reasons, the number of foreign visitors to Asia from the U.S. and the other western countries will continue to increase steadily. As the Korean Government and tour operators increase publicity both about Korea and tours available to the area, more western tourists visiting Asia will consider Korea an interesting place to visit.

III. Present Foreign Visitor Traffic to Kyongju

16. Kyongju is expected to become, after Seoul, the principal point of visitor interest in Korea. The number of foreign tourists to Kyongju increased by 68% from 44,650 in 1971 to 77,300 in 1972. Of the latter, only 46,000 stayed for one night or more, reflecting the severe lack of accommodation and other facilities for tourists. According to the local hotel managers, more than 90% of those coming to Kyongju are Japanese tourists, particularly group or package tours staying in the area one or two nights on the way to or from Busan and Seoul. A very small number of non-Japanese foreign tourists visit Kyongju. Average length of stay is short, 1.8 days.

17. Seasonality of foreign visitor traffic to Kyongju, like that for Korea generally, is not marked. The flow of visitor traffic is fairly constant throughout the year except for the three winter months (December-February). The temperature of Kyongju is relatively mild during the period April-November.

18. Until the Seoul-Busan Highway opened in 1970, the railway was the major means of transportation for visitors to Kyongju. In 1972, more than 50,000 passenger cars traveled to the area. Rail is still important, however, particularly for those Koreans in the lower-income brackets. Express bus lines connect Kyongju to three major areas: Seoul (10 times daily); Taegu (21 times daily); Pusan (35 times daily). It is expected that bus service will continue to serve as the major means of transportation because of its frequency

and speed. A survey made by the Kyongju Tourism Development Economic Study Team in 1972 showed that the most popular means of transportation for foreign visitors to Kyongju was the sightseeing bus, followed by taxis and express buses. The train was the least popular form of transportation for foreign visitors.

IV. Future Foreign Visitor Traffic to Kyongju

19. Along with its natural scenic beauty, Kyongju's historical and cultural assets make the area appeal to a large number of foreign visitors. Further, because of Kyongju's easy accessibility from the major tourist areas served by the highway between Busan and Seoul, the area can expect to obtain a major part of the tourist influx to Korea, if the necessary accommodations and amenities are provided. Of the Japanese visitors to Korea, who will constitute the bulk of foreign visitors to the country in the next decade, it is estimated that more than half will visit Kyongju. As to non-Japanese visitors, most of these will visit Korea on long holiday trips to Asia promoted by tour operators. Thus, the purpose of their trips to Korea will be purely for sightseeing with a relatively limited length of stay. In this regard, Kyongju offers the most attractive possibilities for these tourists. It is expected that the proportion of foreign visitors to the Kyongju area by country of origin will be about 85% from Japan, 10% from the U.S. and 5% from other countries.

V. Projections

20. The total number of foreign visitor arrivals in Korea has been projected by the mission to increase from the actual figure of 370,700 in 1972 to 820,000 in 1976 and to 2 million by 1982. This implies an average growth rate of 18% per year over the whole period, as compared with 33% per year in the period 1966-1972. It is estimated that some 28% of total foreign visitor traffic to Korea will visit Kyongju in 1976 and that this proportion will rise to almost 60% by 1982. On this basis the number of foreign visitors to Kyongju is projected to increase to 233,000 in 1976 and 1.2 million in 1982. Of these, assuming that the first stage of development plan for Bomun is completed in the middle of 1976, it is projected that the number who will stay overnight in Kyongju would be 116,500 in 1976, increasing to 805,500 in 1982; these figures represent 50% of the expected total foreign visitors to Kyongju in 1976 and 68% in 1982.

21. With regard to tourist expenditures, the Kyongju Tourism Development Economic Study Team made a survey in 1972 indicating that average daily expenditures by foreign tourists in Korea amounted to US$ 51 for overnight visitors and US$ 17 for day visitors. They also estimated average daily expenditures per visitor to Kyongju at US$ 53 and US$ 20 respectively. These expenditure levels seems relatively high for the existing tourist facilities in the area. (It is possible that the figures include a considerable amount of money spent on entertainment at traditional Korean restaurants in the area by the overnight visitors and, for the day visitors, expenditures for transportation between Kyongju and the places they stay.) The mission has conservatively estimated average daily expenditures by overnight visitors at US$ 43 (with an average length of stay of 1.5 - 1.7 days) which represent an average expenditure of US$ 50 for adult overnight visitors and US$ 20 for student groups. The average daily expenditure for day visitors is estimated at US$ 15 for adults and US$

22. Kyongju is still largely a center for domestic tourism. In 1972, 1.3 million domestic tourists visited Kyongju, of which 1 million stayed in the Kyongju (city) area for more than one night. The development of the Bomun Lake area will serve to increase the number of domestic tourists visiting Kyongju and a substantial number of these tourists will visit the project area. There will naturally be an increase in revenues from this source. However, it is very difficult to estimate such revenues in the Bomun resort. The mission assumes that this amount will be offset by the fact that foreign overnight visitors will spend some of their projected expenditures outside of the Bomun resort. Therefore, the above projections do not take into consideration the anticipated increase in spending by local tourists. For this reason, and in view of the assumptions described earlier regarding the growth of the market, length of stay and average daily expenditure, these projections are considered highly conservative.

NUMBER OF JAPANESE TRAVELLING ABROAD 1/

Year	
1962	74,822
1963	100,074
1964	127,749
1965	158,827
1966	212,409
1967	267,538
1968	343,542
1969	492,880
1970	663,467
1971	961,135
1972	1,392,000

Average Annual Growth Rate (%)	
1962-1972	36
1967-1972	39
1970-1972	45

Source: Ministry of Justice

1/ Excluding travellers to Okinawa.

JAPANESE TOURISTS ABROAD BY SELECTED DESTINATION[1/]

Countries or Territories	1968	1969	1970	1971	1972	Average Annual Growth Rate % 1968-1972
Hong Kong	96,387	143,746	168,473	237,950	349,212	38
Taiwan	103,332	143,624	177,446	255,699	277,704	28
Thailand	31,548	42,872	46,952	55,777	60,674 2/	-
Korea	25,219	32,181	51,711	96,531	217,287	70
Singapore	20,004	25,546	32,739	45,057	70,280	37
Philippines	14,188	15,202	15,838	23,589	25,969	16
Indonesia	n.a.	7,814	8,416	n.a.	n.a.	-
Australia	6,770	9,024	11,217	16,042	n.a.	-
New Zealand	1,910	2,524	3,300	4,500	n.a.	-
Canada	12,515	18,525	22,011	25,855	n.a.	-
U.S.A.	99,408	136,528	207,455	311,066	417,048	43
of which: Hawaii	51,625	60,710	93,665	144,860	200,700 3/	40
Guam	n.a.	n.a.	35,775	75,000	99,400 3/	-
Italy	74,100	94,600	150,300	148,500	n.a.	-
Spain	19,681	25,007	32,700	40,622	n.a.	-
U.K.	42,500	59,100	82,461	100,465	132,697	33
West Germany	98,669	117,345	141,327	146,881	n.a.	-
Switzerland	61,139	80,118	100,455	119,407	n.a.	-

1/ The number of Japanese visitor arrivals to each country or territory.

2/ Data for January-September
3/ Estimates based on the data obtained from the leading tour operators in Japan.

Source: OECD, IUOTO and Tourism Bureau of Ministry of Transportation (Japan) and JNTO.

ANNEX II
Table 3.

POPULAR DESTINATIONS ON JAPANESE VACATION TOURS

	1970	%	1971	%	1972	%	TOTAL	%
Far East and Southeast Asia	55,239	(40)	103,028	(35)	140,670	(34)	289,937	(35)
Guam	14,769	(11)	55,474	(19)	73,515	(18)	143,758	(17)
Hawaii	38,248	(27)	81,867	(27)	113,431	(27)	233,546	(27)
U.S.A.	8,649	(6)	13,411	(4)	23,577	(5)	45,637	(5)
Europe	20,990	(15)	35,303	(12)	58,582	(14)	114,875	(13)
Round the World	1,290	(1)	1,938	(1)	2,294	(1)	5,522	(6)
Other	461	(-)	6,556	(2)	5,514	(1)	12,531	(2)
	139,646	(100)	297,577	(100)	417,583	(100)	854,806	(100)

Source: Five major tour operators in Japan: JTB, JALPACK, NIPPON EXPRESS, HANKYU KINKI.

ANNEX II
Table 4

JAPANESE TOURIST MARKET

PROJECTION OF NUMBER OF JAPANESE TRAVELLERS GOING ABROAD

(000)

Current Year	Vacation	Business	Other	Total
(Actual)				
1968	154.2	161.7	27.6	343.5
1969	255.5	205.8	31.6	492.9
1970	364.9	258.8	39.8	663.5
1971	634.3	249.9	76.9	961.1
1972	974.4	348.0	69.6	1,392.0
(Projections)				
1973	1,364.0	400.0	80.0	1,844.0
1976	3,743.0	609.0	122.0	4,474.0
1980	10,235.0	932.0	186.0	11,353.0
Average Annual Growth Rate %				
1968-72 (Actual)	59.0	21.0	26.0	42.0
1972-76	40.0	15.0	15.0	34.0
1976-80	29.0	11.0	11.0	26.0
1972-80	34.0	13.0	13.0	30.0

Source: Mission's estimates

COMPARISON OF REGULAR AND GROUP AIR FARES FOR POPULAR NEARBY AREAS FROM TOKYO

Destination	Distance and Air Fares from Tokyo		
	Distance (mile)	Regular Air Fares (Round Trip) (US$)	Group Air Fares (Round Trip) (US$)
Busan 1/	609	138	-
Seoul	725	170	134.80
Taipei	1,304	240	167.30
Manila	2,234	390	238.50
Hong Kong	1,788	380	204.80
Bangkok	3,418	550	342.30
Singapore	4,011	600	360.00
Jakarta/Denpasar	5,264	690	416.40
Hawaii	3,849	696	646.10
Guam	1,557	270	260.70

1/ 69 km from Kyongju.

Source: Japan Creative Tour Co., Ltd.
Japan Airlines.

ANNEX II
Table 6

VISITORS TO KYONGJU, 1966-72 [1]
(in thousands)

	Koreans			Foreigners	Total
	Students in Groups	General	Sub-Total		
1966	339.0 (36)	610.3 (64)	949.3 (100)	9.7	959.0
1967	480.6 (47)	552.1 (54)	1,032.7 (100)	11.5	1,044.2
1968	504.2 (44)	634.8 (58)	1,139.0 (100)	12.1	1,151.1
1969	609.8 (48)	671.1 (52)	1,280.9 (100)	18.1	1,299.0
1970	543.1 (44)	692.0 (56)	1,235.1 (100)	22.0	1,257.1
1971	361.5 (25)	1,106.0 (75)	1,467.5 (100)	44.7	1,512.2
1972	334.8 (27)	924.0 (73)	1,258.8 (100)	75.3	1,334.1

1/ Includes day excursionists.

Source: Kyongju City.

ANNEX II
Table 7.

OVERNIGHT VISITORS TO KYONGJU BY TYPE OF ACCOMMODATION, 1971-72

(in thousands)

Accommodation	Koreans				Foreigners		TOTAL	
	Students		General					
	1971	1972	1971	1972	1971	1972	1971	1972
Tourist Hotels	-	-	9	15	10	23	19	38
(%)	(-)	(-)	(47)	(40)	(53)	(61)	(100)	(100)
Other Hotels	-	-	12	22	7	14	19	36
(%)	(-)	(-)	(63)	(66)	(37)	(39)	(100)	(100)
Korean Inns	325	318	553	610	9	9	887	937
(%)	(37)	(34)	(62)	(65)	(1)	(1)	(100)	(100)
Total	325	318	574	647	26	46	925	1,011
(%)	(35)	(32)	(62)	(64)	(3)	(5)	(100)	(100)

Source: Kyongju City

ANNEX II
Table 8

SEASONALITY OF VISITOR TRAFFIC TO KYONGJU, 1969-72
(in thousands)

	Domestic Visitors			Foreign Visitors		
	Total 1969-72	Average 1969-72	Percent	Total 1969-72	Average 1969-72	Percent
January	80	20	1.5	4	1	2.5
February	63	16	1.2	4	1	2.3
March	95	24	1.8	8	2	5.0
April	795	199	15.0	16	4	9.8
May	1,120	280	21.1	16	4	10.2
June	243	61	4.6	11	3	6.5
July	139	35	2.6	12	3	7.5
August	217	54	4.1	25	6	15.8
September	589	147	11.1	16	4	9.8
October	1,455	364	27.5	22	6	14.0
November	392	98	7.4	19	5	11.8
December	112	28	2.1	8	2	4.8
	5,300	1,326	100.0	165	41	100.0

Source: Kyongju City

TOURIST ACCOMMODATION BY TYPE IN KYONGJU, 1971-72

	Number of Accommodation		Number of Rooms	
	1971	1972	1971	1972
Tourist Hotel (Class II)	2	2	96	142
Hotel (Class III)	5	5	104	115
Korean Inns	105	109	1,503	1,791
Boarding House	30	36	208	252
Total	142	152	1,911	2,300

Source: Kyongju City

PROJECTED NUMBER OF FOREIGN VISITORS TO KOREA BY NATIONALITY, 1972-1982

(in thousands)

	Japan		U.S.A.		Koreans Abroad		Other		Total/of which:		Vacation	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
(Actual)												
1966	16.9	(25)	30.2	(44)	12.0	(18)	8.9	(13)	68.0	(100)	18.8	(28)
1972	217.3	(59)	63.6	(17)	55.3	(15)	34.5	(9)	370.7	(100)	209.2	(56)
(Projection)												
1973	276.0		70.0		61.0		43.0		450.0		275.0	(61)
1976	579.0	(71)	90.0	(11)	81.0	(10)	70.0	(9)	820.0	(100)	598.0	(73)
1980	1,201.0	(77)	121.0	(8)	106.0	(7)	132.0	(8)	1,560.0	(100)	1,272.0	(82)
1982	1,600.0	(80)	140.0	(7)	120.0	(6)	140.0	(7)	2,000.0	(100)	1,675.0	(84)
Average Annual Growth Rate (%)												
1966-72	52		15		29		26		33		50	
1972-76	28		9		10		18		22		30	
1976-82	18		7		6		12		15		19	
1972-82	22		8		8		15		18		23	

Source: Mission estimates.

ANNEX II
Table 11

PROJECTED NUMBER OF JAPANESE TRAVELING TO KOREA, 1972-1980

(in thousands)

	(a) Japanese Going Abroad		Japanese to: (b) Korea		(c) Kyongju	
	No.	(%)	No.	(%) of (a)	No.	(%) of (b)
(Actual)						
1966	212.4	(100)	16.9	(8)	n.a.	(41)
1967	267.5	(")	19.7	(7)	n.a.	
1968	343.5	(")	25.2	(7)	n.a.	
1969	492.9	(")	32.2	(7)	n.a.	
1970	663.5	(")	51.7	(8)	n.a.	
1971	961.1	(")	96.5	(10)	40.2	(41)
1972	1,390.0	(")	217.3	(16)	67.8	(31)
(Projection)						
1973	1,844.0	(")	276.0		86.0	(31)
1976	4,474.0	(")	579.0		210.0	(36)
1980	11,354.0	(")	1,201.0		656.0	(55)
Average Annual Growth Rate (%)						
1966-72	37		52		70 a/	
1972-76	34		28		33	
1976-80	26		20		33	
1972-80	30		24		33	

Source: Mission estimates.

a/ 1971-72; previous year data not available.

KOREA: KYONGJU TOURISM PROJECT

PROJECTIONS FOR FOREIGN VISITORS TO KYONGJU, 1972-1982

(000)

Project	Year: Fiscal	Year: Operation	Visitors to Korea (a) Vacation	(b) Business	(c) Family	(d) Other	(e) Total	Visitors to Kyongju 1/ % of (a)	(f) Vacation	% of (b)+(c)+(d)	(g) Business, Family Others	Total	Hotel Guests (%)		Average Length of Stay	Over-nights	No. of Rooms Required: Double Occ'y	Avg. Room 2/ Occ'y	Annual	Accumulated
	1966		19.0	9.0	16.0	24.0	68.0													
	1971		96.0	23.0	50.0	64.0	233.0													
	1972		209.0	31.0	55.0	76.0	371.0													
1	1973		275.0	34.0	61.0	80.0	450.0	25	68.0	15	27.0	95.0								
2	1974		350.0	38.0	67.0	85.0	540.0	25	88.0	17	33.0	121.0								
3	1975		464.0	42.0	74.0	90.0	670.0	25	115.0	19	39.0	154.0								
4	1976	1	598.0	46.0	81.0	95.0	820.0	30	179.0	24	54.0	233.0	50	116.5	1.5	174.8	1.6	50	600	600
5	1977	2	752.0	50.0	88.0	100.0	990.0	36	272.0	30	72.0	344.0	55	189.3	1.5	284.0	1.6	55	300	900
6	1978	3	916.0	55.0	94.0	105.0	1,170.0	41	373.0	35	89.0	462.0	55	254.1	1.5	381.2	1.6	60	200	1,100
7	1979	4	1,090.0	60.0	100.0	10.0	1,360.0	46	503.0	35	95.0	598.0	61	367.3	1.6	587.7	1.6	65	400	1,500
8	1980	5	1,272.0	67.0	106.0	115.0	1,560.0	53	671.0	35	101.0	772.0	62	481.8	1.6	770.9	1.6	70	400	1,900
9	1981	6	1,464.0	74.0	112.0	120.0	1,770.0	61	886.0	35	107.0	993.0	63	626.8	1.7	1,065.5	1.6	75	500	2,400
10	1982	7	1,675.0	80.0	120.0	125.0	2,000.0	63	1,063.0	35	114.0	1,177.0	68	805.3	1.7	1,369.4	1.6	75	600	3,000
Average Growth Rate (%)																				
	1966-72	(Actual)	52	23	23	20	33													
	1972-77		29	10	10	6	22		42		27	38								
	1977-82		17	10	6	4	15		31		10	28								
	1972-82		23	10	8	5	18		36		17	32								

1/ The possible number of domestic tourists to Kyongju is not taken into account for this projection.

2/ The progressive occupancy levels are used for calculating the optimum number of rooms required.

KOREA

APPRAISAL OF THE KYONGJU TOURISM PROJECT

ECONOMIC JUSTIFICATION[1/]

PROJECT COSTS AND BENEFITS

1. The gross benefits resulting from the tourism related components of the project are taken to be only the expenditures made by visitors in the Kyongju-Bomun Lake area. Although some portion of their expenditures on international and domestic transportation are properly attributable to the project, they have not been taken into account in the calculation of project rates of return since it is not possible in practice to calculate the appropriate costs and benefits. An important characteristic of the tourist expenditure in the Bomun resort area is that over 95% of it will consist of foreign exchange.

2. The relevant costs are the capital and operating costs of the infrastructure provided under the proposed project, plus the capital and operating costs of hotel accommodation and related superstructure in the project area such as restaurants and entertainment facilities. The revenue and cost assumptions are explained below.

REVENUE ASSUMPTIONS

3. As the project is part of a larger whole, including the hotels and other superstructure facilities, its economic evaluation has been made in terms of this larger whole. Some of the facilities to be provided would serve and be paid for directly by the tourists, while others would be compensated for only indirectly. Accordingly, the costs and benefits must be carefully analyzed so as to avoid double counting.

4. It is assumed that visitor expenditures in the Bomun Lake resort area would not differ substantially from expenditures of air visitors to Korea generally. On the basis of official records of foreign exchange receipts, the average daily expenditure was estimated to be about US$40.00 in 1972. Official exchange receipts, however, tend to underestimate tourist expenditure to some degree. According to a

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1/ This annex deals only with the tourism related components of the project, while the justification of the agricultural component is dealt with in Annex IV and the utilities in Annexes V and VI. The tourism related components, including the cost of hotels and other superstructure, represent over 90% of the total investment program.

survey conducted recently in the Kyongju city area, overnight guests were estimated to spend about US$53.00 and day visitors about US$20.00 per day. However, the gross revenue projections for the Bomun Lake area are based on a more conservative assumption by the mission of an average daily expenditure of US$43.00 for overnight guests and US$10.00 per day for daily visitors.

5. The combined average daily expenditure of hotel guests and daily visitors in the project area would thus be about US$34.65, and would be distributed as follows: hotel ($17.35); shopping ($4.35); food and beverage outside the hotels ($3.45); recreation, including golf ($4.35); and other, including local transportation ($5.20).

6. In projecting project revenues it was assumed that the average length of stay of hotel guests would increase from 1.5 days in 1976 to 1.7 in 1981, and remain constant thereafter. The projected increases in hotel accommodation would achieve a level of room occupancy of 75% in three years, with a first year occupancy of 55%. Occupancy of 1.6 persons per room is assumed to remain the same throughout the economic life of the project.

COST ASSUMPTIONS

7. Economic costs of operating the superstructure facilities are derived from the projected financial accounts of hotels, restaurants, and other facilities, which in turn are based on actual experience of similar facilities elsewhere in Korea. The projected operating and maintenance costs of the non revenue earning infrastructure items (such as roads, street lighting and landscape maintenance) have been included in the calculation of operating and maintenance costs for the project operating unit - KTA. Revenue earning infrastructure (such as electricity, water and sewerage) has been excluded from the rate of return calculations for the tourism related components of the project. The gross revenues of these utilities have been projected on the basis of expected consumption by the hotels and other superstructure facilities. The projection of utilities charges in the operating costs of the superstructure facilities has been carefully matched with the projected gross revenues of the utilities. The gross operating profit of the utilities has then been counted as a benefit in justifying the related investments (see Annexes V and VI).

8. Hotel investment costs are assumed to average US$22,000 per room, excluding the cost of land. Investment costs, operating costs and gross revenues are all calculated in 1973 prices. The capital costs and gross operating profits of the tourism project are summarized below:

BOMUN LAKE RESORT AREA
(US$ '000)

Year	Investment Costs Infrastructure	Investment Costs Hotels	Other Investment Costs	Total Investment Costs	Gross Operating Profits (Losses) of Resort Area a/
1973	3857	-	-	3857	-
1974	6530	6600	-	13130	-
1975	10876	9900	1799	22575	102
1976	4078	5500	175	9753	853
1977	1798	6600	175	8573	4003
1978	-	8800	664	9464	6321
1979	-	9900	-	9900	9958
1980	-	12100	-	12100	13558
1981	-	6600	-	6600	18452
1982	-	-	-	-	23498
1983	-	-	-	-	26348
1984-98	-	-	-	-	29337

a/ Including the hotels, restaurants and other superstructure facilities, and the operations of KTC.

9. The gross operating profit resulting from the main categories of average visitor expenditures per day are shown below for a typical operating year: 1/

PROJECTED GROSS OPERATING PROFITS
(US $)

Expenditure Items	Visitor Expenditures	Gross Operating Profit
Hotels	17.35	6.51
Shopping	4.35	1.40
Catering	3.45	.69
Recreation	4.35	1.95
Others	5.20	1.89
	34.70	12.44

10. Individual sub-components of the project have varying economic lives, but as a whole it is estimated that the project would have an economic life of about 25 years. For purposes of calculating the internal rate of return, the need to make modest provision for some replacement expenditures during this period is considered to be offset by the life of the main assets beyond 25 years.

1/ In this case, the "typical year" for the complex as a whole begins in 1984, since some hotels would not reach their normal projected occupancy levels until then. Figures are in 1973 prices.

INTERNAL ECONOMIC RATE OF RETURN

11. Based on the above assumptions, the internal economic rate of return on the tourism-related program of investments would be 18.5%.[1/] The acquisition costs of land have been reviewed and are considered to reflect reasonably accurately the economic value of land in terms of its alternative uses. On the basis of the relative availability of skilled and unskilled workers in the area, their proportional employment in the project, and the existing wage levels for each, it is expected that under-pricing of skilled labor will roughly offset over-pricing of unskilled labor. Hence, no adjustment for shadow-wages has been made in the estimated payroll costs of the project. Furthermore, a shadow exchange rate has not been used in estimating the true economic rate of return.

12. It is expected that foreign investors will be interested in building hotels at Bomun. Assuming that one half the hotel rooms would be financed from abroad, the rate of return on the purely domestically financed investment (including the Bank loan, but excluding both the foreign private investment and the net repayments and other returns accruing to foreigners) would be 20.7%. This is because foreign hotel investors would not participate in those benefits of the project arising from tourist expenditures outside the hotels and would receive an after-tax return on their investment somewhat lower than the project's overall rate of return - thus raising the share and the rate of return accruing to domestic capital (including the Bank-financed portion). If the expected foreign private investment were available only for this tourism project, without any impact whatsoever on the amount and terms of foreign capital available for the rest of the economy, then the return on domestic investment (including the Bank loan) would be the relevant one to consider. If, on the other hand, the private foreign investment in tourism were part of a foreign capital pool available to the whole Korean economy, fully determined in respect to its size and terms, then clearly the relevant consideration would be the return on the overall investment. The foreign share would then be part of the overall resource pool under Korea's command, over which it must maximize returns. Presumably, the true situation is intermediate between these two extremes; some of the private foreign investment

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1/ The two major roads (Namsan and Bobul) included in the tourism-related program of investments were evaluated separately by the consultants, in terms of road-user benefits. Their calculations yielded rates of return in excess of 20% for each road.

in tourism may not be available for other projects, but it does influence the amount of other capital inflows, and its terms. However, as the returns both on the overall project and on the Korean funds invested in it (including IBRD funds) are quite satisfactory, the project is acceptable under any reasonable assumption about its impact on capital inflows to the Korean economy.

SENSITIVITY ANALYSIS

13. The rate of return would be sensitive to changes in investment costs, the opening date and gross operating profit levels. With varying assumptions for each of these factors, the internal economic return would range from 15.9 to 19.9%. Results of this sensitivity testing are shown in the following table:

	Resulting Rate of Return (%)
(i) Investment costs +10%	17.1
+20%	15.9
(ii) Delay in opening dates	
(a) by one year	17.4
(b) by two years	16.4
(iii) GOP levels[1/]	
(a) +10%	19.9
(b) -10%	17.0

BALANCE OF PAYMENTS AND EMPLOYMENT EFFECTS

14. The proposed project is expected to increase gross foreign exchange earnings by about US$ 8.4 million in 1976 when the first hotels open and by US$ 71.0 million per year from 1984 when all of the hotels will have achieved their projected "typical year" occupancy levels. This compares with US$ 74.7 million earned by tourism in Korea in 1972. Because of the high proportion of foreign tourists expected to visit the area, and the low import content of operating costs (about 10% in existing hotels in Korea), the estimated net foreign exchange earnings of the project are relatively high. In order to account for the possible transfers of investment income abroad by foreign hotel investors and operators, we have assumed that roughly one-half of the hotel rooms may involve foreign ownership and, hence, that as much as one-half of the annual net profits of the hotels

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1/ The Gross Operating Profit of hotels and other superstructure.

might be repatriated. Projecting a net profit on sales of about 5% in 1976 (when the first hotels come on stream) and 10% by 1984 (when the hotels reach their full projected occupancy levels), the repatriation of profits could amount to as much as US$ 0.21 million in 1976, and US$ 3.55 million by 1984. On this basis, the net foreign exchange earnings, after accounting for the foreign exchange component of operating and capital costs, and the repatriation of profits by foreign hotel operators, would amount to US$ 7.9 million in 1976 and US$ 62.8 million in 1984, which compares with the estimated foreign exchange component of the proposed project of US$ 18.8 million including price contingencies and the foreign exchange component of superstructure of about US$ 25.0 million.

15. When fully operational, the project is expected to provide direct employment for about 5,400 workers in the hotels and 1,500 in other facilities of the resort. Indirect employment generated in agriculture, handicrafts, transportation and other service sectors is difficult to estimate but may amount to 10,000 to 15,000 new jobs.

ANNEX III
Table 1

KYONGJU TOURISM PROJECT
HOTEL OPERATING PROJECTIONS

Fiscal Year / Operating Year	1976 / 1	1977 / 2	1978 / 3	1979 / 4	1980 / 5	1981 / 6	1982 / 7	1983 / 8	1984 / 9
1. Rooms/Occupancy (55%)	600	300	200	400	400	500	600	-	-
" " (65%)	-	600	300	200	400	400	500	600	-
" " (75%)	-	-	600	900	1,100	1,500	1,900	2,400	3,000
Total	600	900	1,100	1,500	1,900	2,400	3,000	3,000	3,000
2. Number of Occupied Rooms									
Per Day	330	555	755	1,025	1,305	1,660	2,080	2,190	2,250
Per Year	120,450	202,575	275,575	374,125	476,325	605,900	759,200	799,350	821,250
3. Average Room Occupancy (%)	55.0	61.7	68.6	68.3	68.7	69.2	69.3	73.0	75.0
Gross Revenue	(6 months (Operations)						(In US Thousand Dollars)		
Room	1,385.2 (50.6)	4,659.2 (50.6)	6,338.3 (50.6)	8,605.1 (50.6)	10,955.8 (50.6)	13,935.7 (50.6)	17,461.7 (50.6)	18,385.2 (50.6)	18,889.0 (50.6)
Food	793.9 (29.0)	2,670.3 (29.0)	3,632.7 (29.0)	4,931.9 (29.0)	6,279.1 (29.0)	7,986.7 (29.0)	10,007.5 (29.0)	10,537.2 (29.0)	10,826.0 (29.0)
Beverage	465.4 (17.0)	1,565.4 (17.0)	2,129.5 (17.0)	2,891.1 (17.0)	3,680.9 (17.0)	4,682.1 (17.0)	5,866.7 (17.0)	6,176.8 (17.0)	6,346.0 (17.0)
Other	93.1 (3.4)	313.1 (3.4)	426.1 (3.4)	578.5 (3.4)	736.4 (3.4)	936.5 (3.4)	1,173.5 (3.4)	1,236.0 (3.4)	1,270.0 (3.4)
Total	2,737.6 (100%)	9,208.0 (100%)	12,526.6 (100%)	17,006.6 (100%)	21,652.2 (100%)	27,541.0 (100%)	34,509.4 (100%)	36,335.2 (100%)	37,331.0 (100%)
Operating Cost & Expenses									
Direct Cost									
Food	277.9	934.7	1,271.5	1,726.2	2,197.7	2,795.4	3,502.8	3,688.0	3,789.0
Beverage	139.6	469.6	638.9	867.4	1,104.3	1,404.6	1,759.9	1,853.2	1,904.0
Sub Total	417.5 (15.3)	1,404.3 (15.3)	1,910.4 (15.3)	2,593.6 (15.3)	3,302.0 (15.3)	4,200.0 (15.2)	5,262.7 (15.3)	5,541.2 (15.3)	5,693.0 (15.3)
Payroll & Rel'd Exp.									
Variable	136.9	460.5	626.5	850.5	1,082.7	1,377.0	1,725.5	1,817.2	1,867.0
Invariable	647.0	1,941.0	2,372.4	3,235.2	4,098.0	5,176.4	6,470.4	6,470.0	6,470.0
Sub Total	783.9 (28.6)	2,401.5 (26.1)	2,998.9 (23.9)	4,085.7 (24.0)	5,180.7 (23.9)	6,553.4 (23.8)	8,195.9 (23.7)	8,287.2 (22.8)	8,337.0 (22.3)
Other Operating Exp.									
Variable	191.6	644.6	876.9	1,190.5	1,515.7	1,927.9	2,415.5	2,543.4	2,613.0
Invariable	129.4	388.2	474.5	647.1	819.7	1,035.4	1,294.2	1,294.0	1,294.0
Sub Total	321.0 (11.7)	1,032.8 (11.2)	1,351.4(10.8)	1,837.6 (10.8)	2,335.4 (10.8)	2,963.3 (10.8)	3,709.7 (10.7)	3,837.4 (10.6)	3,907.0 (10.5)
Overhead Exp.									
Adm. & Gen. Exp.	243.9	761.5	969.0	1,319.2	1,674.3	2,120.3	2,652.8	2,708.0	2,738.0
Promotion	38.8	116.4	142.3	194.1	245.9	310.6	388.2	388.0	388.0
Light, Heat & Power	210.3	630.9	771.1	1,051.5	1,331.9	1,682.4	2,103.0	2,103.0	2,103.0
Repair & Maint.	99.0	297.0	363.0	495.0	627.0	792.0	990.0	990.0	990.0
Sub Total	592.0 (21.6)	1,805.4 (19.6)	2,245.4 (17.9)	3,059.8 (18.0)	3,879.1 (17.9)	4,905.3 (17.8)	6,134.0 (17.8)	6,189.0 (17.0)	6,219.0 (16.7)
Total Operating Cost	2,114.4 (77.2)	6,644.4 (72.2)	8,506.1 (67.9)	11,576.7 (68.1)	14,697.2 (67.9)	18,622.0 (67.6)	23,302.3 (67.5)	23,854.8 (65.7)	24,156.0 (64.7)
House Profit (% of Gross Revenue)	623.2 (22.8%)	2,563.6 (27.8%)	4,020.5 (32.1%)	5,429.9 (31.9%)	6,955.0 (32.1%)	8,919.0 (32.4%)	11,207.1 (32.5%)	12,480.4 (34.3%)	13,175.0 (35.3%)
Store Rental	81.0 (3.0)	243.0 (2.6)	297.0 (2.4)	405.0 (2.4)	513.0 (2.4)	648.0 (2.4)	810.0 (2.3)	810.0 (2.2)	810.0 (2.2)
Gross Operating Profit (% of Gross Revenue)	704.2 (25.7%)	2,806.6 (30.5%)	4,317.5 (34.5%)	5,834.9 (34.3%)	7,468.0 (34.5%)	8,567.0 (34.7%)	12,017.1 (34.8%)	13,290.4 (36.6%)	13 985.0 (37.5%)

ANNEX III
Table 2

PROJECTED NUMBER OF HOTEL EMPLOYEES REQUIRED: 1976-82

Year	New Hotel Rooms	New Employees Needed (Rooms x 1.8)	Total Hotel Rooms	Total Hotel Employees
1976	600	1080	600	1080
1977	300	540	900	1620
1978	200	360	1100	1980
1979	400	720	1500	2700
1980	400	720	1900	3420
1981	500	900	2400	4320
1982	600	1080	3000	5400

Note: Excludes employees in resort facilities other than hotels, estimated at 1,500 persons.

ANNEX VII
Table 3

KOREA: KYONGJU TOURISM PROJECT

Consolidated Operating Projections of Superstructure Development
(In U.S. Thousand Dollars)

FISCAL YEAR / OPERATING YEAR	'76 1	'77 2	'78 3	'79 4	'80 5	'81 6	'82 7	'83 8	'84 9
Hotels:									
Revenue	2,737.6	9,208.0	12,526.6	17,006.6	21,652.2	27,341.0	34,509.4	36,335.2	37,331.0
Operating Cost	2,033.4	6,401.4	8,208.1	11,171.7	14,184.2	17,974.0	22,492.2	23,044.8	23,346.0
G.O.P.	704.2	2,806.6	4,317.5	5,834.9	7,468.0	9,367.0	12,017.1	13,290.4	13,985.0
(%)	(25.7)	(30.5)	(34.5)	(34.3)	(34.5)	(34.7)	(34.8)	(36.6)	(37.5)
Shopping Center:									
Revenue	390.1	1,102.6	1,438.2	2,604.9	3,580.9	5,480.0	7,007.4	8,003.5	9,348.3
Operating Cost	269.2	758.6	986.6	1,781.8	2,442.2	3,726.4	4,751.0	5,426.4	6,338.1
G.O.P.	120.9	344.0	451.6	823.1	1,138.7	1,753.6	2,256.4	2,577.1	3,010.2
(%)	(31.0)	(31.2)	(31.4)	(31.6)	(31.8)	(32.0)	(32.2)	(32.2)	(32.2)
Catering Facilities:									
Revenue	312.1	882.1	1,150.6	2,084.0	2,864.8	4,384.0	5,605.9	6,402.9	7,478.6
Operating Cost	299.6	736.6	955.0	1,719.3	2,349.1	3,571.0	4,540.8	5,154.3	5,980.9
G.O.P.	12.5	145.5	195.6	364.7	515.7	811.0	1,065.1	1,248.6	1,495.7
(%)	(4.0)	(16.5)	(17.0)	(17.5)	(18.0)	(18.5)	(19.0)	(19.5)	(20.0)
Recreation Center:									
Revenue	236.1	661.6	863.0	1,563.0	2,148.6	3,288.0	4,204.4	4,802.2	5,608.9
Operating Cost	220.1	516.0	667.1	1,141.0	1,504.0	2,235.8	2,774.9	3,073.4	3,477.5
G.O.P.	14.0	145.6	215.8	422.0	644.6	1,052.2	1,429.5	1,728.8	2,131.4
(%)	(6.0)	(22.0)	(25.0)	(27.0)	(30.0)	(32.0)	(34.0)	(36.0)	(38.0)
Golf Course:									
Revenue	156.0	441.0	575.3	1,042.1	1,432.4	2,192.0	2,803.0	3,201.5	3,739.3
Operating Cost	99.8	273.5	345.2	604.6	787.8	1,139.8	1,401.5	1,536.7	1,682.7
G.O.P.	56.2	167.6	230.1	437.7	644.6	1,052.2	1,401.5	1,664.8	2,056.6
(%)	(36.0)	(38.0)	(40.0)	(42.0)	(45.0)	(48.0)	(50.0)	(52.0)	(55.0)
Other Facilities:									
Revenue	468.1	1,323.1	1,725.8	3,125.9	4,297.1	6,576.0	8,408.9	9,604.2	11,217.9
Operating Cost	426.0	1,124.6	1,268.7	2,094.7	2,764.7	4,242.6	5,439.3	6,191.6	7,144.6
G.O.P.	42.1	198.5	457.1	1,031.2	1,532.4	2,333.4	2,969.6	3,412.6	4,073.3
(%)	(9.0)	(15.0)	(26.5)	(33.0)	(35.7)	(35.5)	(35.3)	(35.5)	(36.3)
Grand Total:									
Revenue	4,298.0	13,618.5	18,279.5	27,426.5	35,976.0	49,461.0	62,539.0	68,349.5	74,724.0
Operating Cost	3,348.1	9,810.7	12,411.8	18,512.9	26,032.0	33,891.6	41,399.8	44,427.2	47,972.8
G.O.P.	949.9	3,807.8	5,867.7	8,913.6	11,944.0	16,569.4	21,139.2	23,922.3	26,751.2
(%)	(22.1)	(28.0)	(32.1)	(32.5)	(33.2)	(33.5)	(33.8)	(35.0)	(35.8)

KOREA: APPRAISAL OF THE KYONGJU TOURISM PROJECT

DUCK-DONG DAM AND IRRIGATION COMPONENT

A. Scope of the Project

1. Development of the Kyongju tourist resort at Bomun Lake requires construction of a multi-purpose dam at Duck-Dong, upstream from the present Bomun reservoir, to create a new reservoir which would enable stabilization of the lake level at Bomun, a feature desirable for recreational and environmental purposes in connection with the tourist resort itself. In addition, the new reservoir would provide sufficient water supply, not otherwise available, for the tourist resort and for the increasing needs of the City of Kyongju (see Annex V). Inasmuch as about 1,227 ha of land are presently being irrigated from the existing Bomun reservoir, the new upstream reservoir would continue to provide water for this purpose. It would also enable irrigation of an additional area of 1,100 ha for which an irrigation system would be constructed as part of the Project.

2. Construction of Duck-Dong dam and the new irrigation system would be carried out by the Agricultural Development Corporation (ADC), a semi-autonomous public entity within the Ministry of Agriculture and Forestry. ADC has broad responsibilities for the development of land and water resources in rural areas throughout Korea, and is already a beneficiary of two Bank loans for irrigation projects (600-KO and 795-743-KO). Upon completion, ADC would transfer the Duck-dong dam to the Kyongju City Government (KCG) since its main purpose would be for municipal water supply, including supply of the tourist resort at Bomun. The irrigation system would be operated and maintained by ADC, while the Farmland Improvement Association (FLIA), or other suitable organization, would assume responsibility for maintaining the system at the farm level. This arrangement would be similar to those made for other irrigation projects in Korea.

B. The Project Area

Climate

3. The project area is roughly rectangular, with a mean width of 1.2 km, a length of 12 km and the long axis running north to south. The eastern side is bordered by a range of mountains rising to 600 m. This feature has an important influence on the local climate. It provides a substantial degree of protection from typhoons and consequent floods which are common on Korea's east coast. In addition, the mountains cause some light precipitation in the area in the dry years which are frequent in the region.

4. December, January and February are the coolest months, with average temperatures of 0.4° to -3.5° C. July and August are the hottest months, with a maximum temperature of 31° C. The cropping season is between March and November. The mean annual rainfall is 1,350 mm. In dry years, which occur in one out of four years on the average, the mean annual precipitation is 750 mm. Fifty percent of yearly rainfall is recorded between June and September. Relative humidity is lowest from December through June and highest in July through September. The mean annual evaporation is approximately 2,000 mm, of which between 1,000 mm and 1,700 mm occur during the irrigation season.

Soils, Topography and Drainage

5. The project covers an area of about 1,500 ha of which, 1,140 ha are irrigable. It is bisected along its long side by a major highway. Approximately 60% of the project area lies between the highway and the Eastern foothills. The land is undulating with slopes varying from 2 to 15%. Two thirds of the area is used mainly for rice production, the steeper land being under upland crops. The existing paddy fields are small and subdivided, but the steep slopes preclude rearrangement and land consolidation because of the high costs. There is a number of very small reservoirs which command only immediately adjacent areas. In the areas West of the main highway the lands are flat and used principally for rice production. Land consolidation is proposed in this section.

6. Soils in the steeper Eastern section of the project area are sandy loams of low to moderate fertility with good natural drainage. In the Western section the soils are coarser, with higher sand and gravel contents. The coarse textured soils of the sandy alluvial deposits on the Western edge of the project area, near the river, are poorly drained because of a high water table and seasonal floods, despite their inherently low water holding capacity and high permeability. Natural drainage is inadequate in the Western Section.

Land Holdings

7. Approximately 1,300 farm families, averaging six members per family, for a total of 7,800 people would be involved in the project area. The mean size of holding is 0.88 ha, which is slightly less than the national average of 0.92 ha.

Agricultural Production

8. Rice and barley account for 80% of the area presently under cultivation, with rice giving 90% of the total value of production. Only 20% of the rice area is irrigated from small tanks, the balance being rainfed. The average yield of polished rice amounts to 2.5 ton/ha. Barley is grown as a second crop on the higher, better drained land, giving a mean yield of 1.9 ton/ha. Small areas of soy bean and various vegetables are also grown. Present cropping intensity in the project area is estimated at 138%.

9. Farm operations are still nearly entirely carried out by hand or by buffalo, despite the shortage of farm labor and the increase in farm wages in recent years. A campaign to promote mechanization through the use of power tillers does not appear to have had much impact, as the rate of tillers to farm families is reported as 1:900.

C. Project Description

10. The project would consist of the following major works:

(a) Duck-Dong dam and reservoir, spillway and Bomun outlet works;

(b) reservoir outlet works for the Bulguk Temple area irrigation system;

(c) Bulguk Temple area irrigation system consisting of canals, flumes, conduits, tunnels and a pumping station;

(d) land consolidation for 1,000 ha; and

(e) road relocation.

11. The Duck-Dong dam is to be a zoned earthfill type (see data in Table 5). The proposed zoning and slopes for the upstream and downstream are adequate. Bedrock is a hard metamorphosed shale which is suitable for the foundation of the dam. A grout curtain is included in the cost estimate The new Duck-Dong reservoir, in addition to providing water to 1227 ha of land presently irrigated from the Bomun reservoir, would also supply 30,000 tons of water per day for municipal use and provide water for the irrigation of a newly developed area of 1,140 ha in the vicinity of Bulguk Temple.

12. Bulguk Intake and Conduit. A multigated intake tunnel would provide for reservoir withdrawals at four levels. The tunnel would have a diameter of 2.5 m and a length of 470 m and would lead into a concrete conduit 1,700 m long.

13. Irrigation Canal. The total length of the main canal would be 17,000 m, consisting of 5,000 m of concrete flume and 12,000 m of earth canal. The canals would be unlined and flumes and drop structures would be concrete.

14. Land Consolidation and on-farm Development. The 695 ha of land in the Eastern section of the project would only be provided with irrigation. Approximately 200 ha of the steeper land, with slopes of more than 10%, would be irrigated directly from turnouts from the main canal. The remaining 485 ha of lands, with slopes between 2 and 10%, would be irrigated through secondary laterals. Roads would be built along the laterals. In the lower lying, flatter Western section of the project area 445 ha area would be subject to rearrangement, consolidation, land levelling and the provision of farm roads. Shallow drains would be provided on 370 ha and deep rains would be dug on 75 ha of poorly drained land lying on the western edge of the project area. Included in the on-farm development would be the reclamation of 10 ha of forest land, most of which is sited on the steeper eastern side of the project area.

15. Road Relocation. The present road through the proposed reservoir would be relocated above the high water level and would extend to a point above the Hwang Yong Valley branch of the reservoir, a length of about 4.1 km. This road would serve as access to the Bulguk intake tower. In addition, two roads, Duck-Dong north and part of Boduck road, would be constructed in order to support development of the adjoining area and to maintain communication with the area north of the Duck-Dong reservoir. Details are described in Annex VII.

D. Water Supply, Demand and Quality

16. Rainfall in the project area is erratic and ill-timed to support maximum farm production. The run-off from the catchment area has been estimated on the basis of 20 years (1952-71) of rainfall data, from Po Hang Meteorological Station and 2 (1963-65) years of stream flows from gaging stations downstream of the Duck-Dong dam site. The average annual run-off for the Duck-Dong catchment is estimated at 31.5 mm^3. Crop water requirements for the 1,200 ha of project lands were estimated on the basis of double cropping. The reservoir operations study indicates that project requirements would be met in 17 years out of 20. From experience on lands irrigated from the Bomun reservoir, no problems of water quality are anticipated.

E. Cost Estimates

17. Total costs of the Duck-Dong dam and Irrigation system are estimated at Won 3,315 million (US$ 8.3 million). Of this total Won 1,693 million (US$ 4.2 million) has been charged to agricultural development. This sum represents 17% of the cost of the dam, based on the share of the water which will be used for irrigation, 100% of the cost of the irrigation system and land consolidation and on-farm development and that portion of total engineering, administration, consulting and land acquisition costs incurred for agricultural development. Technical contingencies included in the agricultural development cost estimates consist of 15% on the dam, 5% on the main canal and 10% on on-farm development (land consolidation). A price contingency based on a cumulative 7% per year is also included in the cost estimates.

F. Procurement and Project Execution

18. All civil works under the project would be executed by contractors selected on the basis of international competitive bidding. ADC, with the assistance of consultants, would be responsible for supervision of construction. The domestic civil engineering industry has grown rapidly in recent years and has proved capable of handling major public works. Local contractors are expected to be the successful bidders on all contracts under the project.

19. All contracts for equipment and supplies would be subject to international bidding. ADC, with the assistance of the consultants, would have responsibility for the preparation of specifications and evaluation of the technical aspects of bids received, while the Office of Supply of the Republic of Korea (OSROK) would handle procurement procedures.

20. ADC's staff would be assisted by consultants in the preparation of final designs and tender documents, the evaluation of bids, supervision of construction and preparation of payments to contractors.

G. Project Operation and Maintenance

21. On existing irrigation projects the Farmers Land Improvement Associations (FLIA) are responsible for operation, maintenance and recovery of investment. The associations function as independent entities, but their annual operating budgets are subject to approval either by the Provincial Government or by the Ministry of Agriculture and Fishery (MAF), depending on the size of the project involved.

22. ADC would be responsible for operation and maintenance of the reservoirs. The FLIA, or other suitable organization, would be responsible for operation and maintenance of on-farm systems, the scheduling of water deliveries, the allocation and collection of project charges, and would also be expected to provide extension services and to enter into agreements with agencies such as the Office of Rural Development (ORD) and the National Agricultural Cooperative Federation (NACF) for assistance to the project farmers.

H. Supporting Agricultural Services

23. The Office of Rural Development (ORD) is the Government agency responsible for agricultural extension, research and demonstration. ORD would provide the project farmers with advice on irrigation and drainage practices, the use of farm machinery, the cultivation of fruit and vegetables and the proper application of lime and agro-chemicals.

24. Farmers obtain fertilizers and agro-chemicals through the cooperatives of the National Agricultural Cooperative Federation (NACF). NACF also provides the short-term credit to finance farm operations. The availability of credit in adequate amounts and at the right time will be essential to the success of the project.

I. Project Charges

25. It is Government policy that farmers belonging to FLIA's, the irrigation users' associations, who benefit from irrigation development are required to pay the operation and maintenance costs of the project and 40% of the capital costs, with interest at 3.5%, normally within a period of 30 to 40 years. It is estimated that the annual charge to farmers would total US$ 86/ha, of which US$ 36/ha would be for operation and maintenance and the balance of US$ 50/ha would be the farmers' contribution to the project's capital cost. Total project charges, including operation and maintenance, would only account for 12% of the net incremental farm income.

J. Production

26. The introduction of irrigation, together with land consolidation and on-farm development, better accessibility, drainage, and increased use of farm machinery, would permit a greater cropping intensity, better yields and a greater diversity of cropping. Expected yeild levels in ton/ha for the main irrigation crops under the project are as follows:[1/] rice, 3.8 (2.5); barley, 2.6 (1.9); Chinese cabbage, 28.0 (12.0); white potato, 16.0 (6.5); sweet potato, 23.0 (7.9). The projected yield for rice is based on a yield of 4.1 ton/ha on the area that would be subject to full on-farm development and a yield of 3.5 ton/ha on the area where only irrigation would be supplied. Expected yield levels would be attained gradually over a five-year period following the inception of irrigation.

27. At full development the relative incidence of rice and barley in the cropping pattern is expected to decline slightly from the present level of 80% to 73%, but the contribution of the two crops to the net income is expected to fall sharply from the existing level of 96% to 65%. This would come about through an increase in cropping intensity from the present 139% to 189%.

Crop	Present (ha)	Future (ha)	Production Present (ton)	Production Future (ton)	Production Increment (ton)
Rice	845	890	2,110	3,380	1,270
Barley	415	700	790	1,820	1,030
Potatoes	30	240	215	4,080	3,865
Garlic	-	60	-	360	360
Vegetables	30	120	360	3,360	3,000
Other	250	150	-	-	-
Total	1,570	2,160			

K. Market Prospects

28. The increased production from the project area is not expected to give any marketing problems. The additional quantities of food grains are very modest. The various vegetable crops produced would be readily disposed of in the major urban areas, which are not distant from the project and are easily accessible. The range of vegetables grown is sufficiently wide to permit rapid shifts from one crop to another in response to market conditions. The proposed cropping pattern provides for 50 ha of orchard crops. The project is located in the main apple-producing area of Korea. The local demand for fruit and vegetables would increase with implementation of the tourism project.

L. Economic Analysis

29. Irrigation coupled with land consolidation and on-farm development would bring about a substantial increase in agricultural production, almost entirely through higher productivity; a diversification of farm activities

1/ Figures in parentheses represent current yields.

from the rice-barley sequence into higher value crops; an increase in farm income; and through the increased production of rice and cereals, a reduction in Korea's foodgrain deficit. It would also contribute toward realizing Government's goal of bringing about a more equitable income distribution between the urban and rural areas and becoming self sufficient in rice production.

30. In evaluating the benefits from agricultural development a price of US$ 220 per M ton for rice and US$ 88 per M ton of barley were used. This increase in the value of rice and barley from the projected IBRD 1980 prices is in line with recent recommendations made in the Agricultural Sector report. Prices for all other crops were based on present average farm gate prices. All hired labor requirements have been costed at the going market rate. Irrigation was assumed to be introduced at the end of the construction period in the second half of 1976. Commencing in 1977 incremental benefits would accrue gradually over a five-year period.

31. At full agricultural development in 1981, the net value of agricultural production would be US$ 0.84 million, with most of the increase being accounted for by rice, garlic, potatoes, vegetables and orchards. The corresponding value without the project assuming a 10% p.a. yield increase through 1980, would have been about US$ 0.26 million. When discounting the incremental benefits and relevant costs over a 50-year agricultural development period, the economic rate of return would be about 13.7%.

ANNEX IV
Table 1

KOREA: KYONGJU TOURISM PROJECT

Costs of Duck-Dong Dam and Irrigation System

Description	Total Cost Won ('000)	Total Cost Charged to Agricultural Development Won ('000)	Total Cost Charged to Agricultural Development US $	Annual Costs to Agricultural Development Year I (Won '000)	Year II (Won '000)	Year III (Won '000)	Year IV (Won '000)
Duck-Dong Dam 1/	995,739	169,275	423,188	43,088	91,550	28,050	6,587
Irrigation System 2/	(848,400)	(848,400)	(2,121,000)		156,585	453,375	238,440
Intake Tower	23,000	23,000	57,500				
Outlet Tunnel	190,500	190,500	476,250				
Main Canal	250,900	250,900	627,250				
Land Consolidation	384,000	384,000	960,000				
Sub-Total before Contingencies	1,844,139	1,017,675	2,544,188				
Contingencies							
Technical:	(232,330)	(108,361)	(270,902)				
Dam 15%	149,360	25,391	63,478(				
Intake Tower 15%	3,450	3,450	8,625(	6,476	28,140	18,610	4,190
Outlet Tunnel 15%	28,575	28,575	71,437(				
Main Canal 5%	12,545	12,545	31,362		3,025	6,588	2,932
Land Consolidation 10%	38,400	38,400	96,000			19,200	19,200
Price:							
7% per annum	353,487	221,881	554,703	3,396	40,512	121,967	56,006
Prof. Services: 3/	(214,722)	(118,494)	(296,235)				
Design	67,322	37,152	92,880	37,152			
Supervision	147,400	81,342	203,355	3,444	19,833	38,481	19,584
O & M During Construction	(70,300)	(41,887)	(104,717)		8,377	12,566	20,944
Land Distribution	6,900	6,900	17,250				
General O & M 4/	63,400	34,987	87,467				
Land Acquisition	(600,400)	(185,000)	(462,500)	(185,000)			
Dam	500,400	85,000	212,500	85,000			
Main Canal	40,000	40,000	100,000	40,000			
Land Consolidation	60,000	60,000	150,000	60,000			
TOTAL	3,315,378	1,693,298	4,233,245	278,556	348,022	698,837	367,883

1/ 17% of total costs charged to Agricultural Development.
2/ 100% of total costs charged to Agricultural Development.
3/ 55.2% of total costs charged to Agric. Devel. (calculated on basis of 17% of total costs of dam and 100% costs of irrigation system.
4/ 55.2% of total costs charged to Agric. Devel. (calculated on basis of 17% of total costs of dam and 100% costs of irrigation system.

PRESENT CROPPING PATTERN[1/]

CROP	CROP AREA (ha)	YIELD (Ton/ha)	FARMGATE PRICE (Won/ton)	GVP	PRODUCTION COSTS Won 1,000/ha	NVP	NET RETURN FROM PROJECT AREA (Won million)
Rice	845	2.5	127,000 (87,800)	320 (220)	100	220 (120)	186 (101)
Barley	415	1.9	64,000 (35,000)	120 (70)	90	30 (-20)	12 (-8)
Potatoes	30	7.2	20,000	140	100	40	1
Vegetables	30	12.0	20,000	240	140	100	3
Other	250					20	5
Total	1,570						207 (102)

Cropping intensity 139% based on net area of 1,130 ha, excluding 10 ha of forest.

1/ All prices expressed at 1973 market values; figures in parenthesis indicate adjustments made for the purpose of economic analysis.

ANNEX IV
Table 3

PRODUCTION COSTS AT FULL DEVELOPMENT

CROP	SEEDS	FERTILIZERS	PESTICIDES	MACHINES	LABOR	OTHERS	TOTAL	TOTAL EXCLUDING LABOR
				Won/ha				
Rice	2,500	12,500	6,600	62,700	48,000	17,700	150,000	102,000
Barley	3,200	11,000	3,600	33,000	37,000	12,200	100,000	63,000
Potato	28,700	10,000	2,200	59,000	55,000	15,100	170,000	115,000
Garlic	132,800	15,500	2,400	69,000	86,000	24,300	330,000	244,000
Orchards	-	20,000	49,000	72,500	166,500	92,000	400,000	233,500
Vegetables	46,200	36,300	6,500	69,300	61,000	20,700	240,000	179,000

PROJECTED CROPPING PATTERN 1/

CROP	CROP AREA (ha)	YIELD (Ton/ha)	FARMGATE PRICE (Won/ton)	PRODUCTION COSTS (Won 000/ha) GVP		NVP	NET RETURN FROM PROJECT AREA (Won million)
Rice	890	3.8	127,000 (88,000)	480 (330)	150	330 (80)	294 (160)
Barley	700	2.6	64,000 (35,000)	170 (91)	100	70 (-9)	49 (-6)
Potatoes	240	17.0	20,000	340	170	170	41
Garlic	60	6.0	200,000	1,200	330	870	52
Vegetables	120	28.0	20,000	560	240	320	38
Orchards	50	-	-	1,000	400	600	30
Other	100	-	-	-	-	200	20
Total	2,160						524 (335)

Cropping intensity 189% based on net area of 1,140 ha, including 10 ha of cleared forest.

1/ All prices expressed at 1973 market values; figures in parenthesis indicate adjustments made for the purpose of economic analysis.

KOREA: APPRAISAL OF THE KYONGJU TOURISM PROJECT
DUCK-DONG DAM AND IRRIGATION COMPONENT
DATA ON MAJOR PROJECT FEATURES

Duck-Dong Dam and Reservoir

Catchment area 5,170 ha

Reservoir storage allocation

Purpose	Elevations m	Capacity ha-m	Surface area - m
Flood surcharge	168.0 to 170.2	550	214.0
Agri. & Municipal	152.0 to 168.0	2,150	196.0
Agricultural 1/		1,052	
Municipal		1,098	
Allowance 100-yr sediment		102	
Inactive	142.0 to 152.0	672	89.8
Dead	streambed to 142.0	346	48.3
Total Agri. + Municipal + Inactive + Dead		3,270	

1/ 452.4 ha-m for new lands; 599.6 ha-m for existing lands

Dam - Zoned earthfill type

Height 49.5 m Length 160 m Volume 713,222 m^3

Spillway - Morning glory - Tunnel with flip bucket

Crest diameter	23.0 m
Crest length	72.2 m
Overflow depth	2.2 m
Tunnel diameter (horseshoe shape)	6.5 m
Design discharge	520.0 m^3/sec
Freeboard	2.0 m

Floods - 900-year-freq. = 458 m^3/sec peak (Design = 520 m^3/sec peak)

Outlet works at dam - Tunnel type

Design capacity at 6.5 m head 2.6203 m^3/sec

Outlet works to serve Bulguk Temple area - Tunnel type

Design capacity at 1.0 m head 1.813 m^3/sec
Intake gates at four levels

Bulguk Temple area irrigation system

Area served 1,200 ha

Bulguk Canal - Total length 19,460 m

Earth canal	11,980 m	Concrete conduit	1,693 m
Concrete flume	5,318 m	Tunnel	469 m

KOREA: APPRAISAL OF THE KYONGJU TOURISM PROJECT

WATER SUPPLY, SEWERAGE AND SOLID WASTE DISPOSAL COMPONENTS

A. Scope of the Project

1. The development of the Bomun Lake resort for the construction of initially 3,000 hotel rooms will cause a rapid development of the nearby city of Kyongju. The population of Kyongju Administrative area is expected to increase from 118,000 to about 168,000 over the next ten years.

2. The project would provide facilities designed to increase the percentage of the population served by pipe-borne water supply from about 38% to 50% in the Kyongju area and provide adequate water supply for the tourist zone. Water-borne sewerage would be provided for downtown Kyongju City and for the tourism zone. Equipment for the collection and disposal in landfill of solid wastes is also provided in the project.

3. Kyongju City Government (KCG) assisted by KDO and consultants would be responsible for the construction of the water supply, sewerage and waste disposal components. KCG intends to establish a separate water and sewerage division which would be responsible for the operation of the scheme including Duck-Dong Reservoir, the water supply source for Bomun. The Duck-Dong Dam would be constructed by the Agricultural Development Corporation (ADC) along with an irrigation scheme which would form another part of the overall project to be financed by the Bank (see Annex IV). ADC would transfer the dam after completion to KCG for operations as part of the water supply scheme for the Bomun area. KCG would administer jointly with the Government agency responsible for form level management the release of water from Duck-Dong Reservoir for the various uses.

4. In preparing the Duck-Dong water supply scheme, insufficient consideration had been given to the exploration of groundwater as an alternative or supplemental source of water supply. A preliminary review of available data suggested, however, that groundwater resources should not be neglected as a potential source of water supply. The Government, therefore, undertook a detailed investigation of the geological conditions prevailing in the Kyongju area and has followed this up by a test drilling program. Preliminary results of the test drilling are encouraging.

5. In the early years of the project, therefore, particularly during the period when the dam is being constructed and the reservoir is filling up, it may be possible to rely on groundwater to supply the Bomun Lake resort area. In the longer term, demands for water at Bomun and in Kyongju would require that the two systems eventually be linked. Should groundwater not be available in sufficient quantity and quality to meet even short term demands at Bomun, then the two systems would need to be linked in time for the first hotels at Bomun to be served by water pumped from the new treatment plant at Kyongju.

Given the rather limited availability of water from the existing Kyongju City water supply system, however, it would also be necessary to construct a separate water treatment plant at the Duck-Dong Reservoir in order to meet the full development needs of the Bomun Lake resort area. Provision for this treatment plant has been included in the project; should sufficient quantities of groundwater be available, of course, the treatment plant at Duck-Dong, and possibly the link with the Kyongju system, could be postponed, with the resultant savings utilized to extend the distribution network in the project area.

B. Description of the Project

Water Supply - Kyongju City

5. Kyongju City presently has a water supply of about 70 l/sec. Work on a new treatment plant to increase this supply to about 230 l/sec has commenced, and infiltration galleries with intake well at Tabdong in the Hyung San river have been completed. The project will include the completion of this scheme and will include:

(i) imported equipment for the Tabdong treatment plant;
(ii) raw water low lift pump station with maximum capacity of 230 l/sec equipped with 3 vertical spindle pumps each capable of 115 l/sec;
(iii) high lift, filtered water pump station with maximum pumping capacity of 230 l/sec equipped with 4 electrically-driven centrifugal pumps;
(iv) 5.6 km of 600 mm and 400 mm prestressed concrete and steel transmission pipeline;
(v) 5000 m^3 distribution storage reinforced concrete reservoir in Kyongju City; and
(vi) 2.7 km of 400 mm and 300 mm secondary water distribution pipeline.

6. The existing Kyongju City waterworks has slow sand filters, and was built in 1933 at Chung Hyodong with a capacity of 35 l/sec. This was doubled in 1967. It has two major operational problems; firstly, a long suction pipeline leading to the intake well fed by infiltration galleries in the Hyung San river which sometimes go dry in the summer; and secondly, the water distribution main pipeline in the river bed is poorly constructed and suffers frequent breaks. A recent health hazard has been the discovery in the raw water of coliform bacteria from sewage discharged into the river by storm drains near the infiltration galleries. If these problems worsen in the future and the plant becomes uneconomical to operate, the consultants recommend closing it as there is insufficient land to rehabilitate or expand the plant in its present location.

7. The new treatment plant under construction at Tabdong is located upstream and away from the pollution hazard. Because there are no records of flow in the Hyung San river the consultants based the capacity of the treatment plant on the lowest recorded drought discharge of 210 l/sec at a recently established gauging station downstream from

the site. The plant is designed for an average output of 230 l/sec but may be expected to operate at 170 l/sec for a few days in the dry season.

9. The raw water from the infiltration galleries is expected to have high turbidity in some seasons of the year, requiring treatment. The three vertical spindle pumps in the collecting well, each of 115 l/sec capacity will lift the raw water to a conservatively-designed, conventional treatment plant with alum dosing, rapid mix, flocculation, horizontal flow sedimentation, rapid sand filtration, chlorination and lime treatment. The high lift pump station will lift water to a 5000 m^3 service reservoir primarily serving Kyongju City. In the early years water will be pumped from Kyongju to Bomun, unless groundwater is found, to provide water supply for the tourist resort until the water supply from the new Duck-Dong Reservoir fills over two seasons, and initial taste, color and odor problems of organic origin are overcome.

Water Supply - Bomun Resort

10. A multipurpose dam would be built above Bomun Lake at Duck-Dong (Annex IV). The impounded water would be used for irrigation, municipal water supply and tourism. If the groundwater exploration is successful it may be economical to use Duck-Dong lake water in the dry months, when it should require only chlorination before distribution. In the wet months, when demand is low and lake water is turbid, groundwater could be used. The 115 l/sec Bomun treatment plant presently proposed in the project could then be substituted for by a less expensive groundwater pumping scheme.

11. The facilities provided for the Bomun tourist zone are designed to supply an average demand of 23 l/sec in 1976 increasing to about 115 l/sec in 1982 and based upon a study of consumption of some of the leading hotels in the country with allowances for daytime visitors and recreational facilities. The facilities include:

(i) a booster pumping station at Kyongju service reservoir to deliver 70 l/sec to the Bomun tourist resort area;
(ii) a 5000 m^3 reinforced concrete service reservoir at Bomun;
(iii) 8.6 km, 700 mm reducing to 300 mm transmission pipeline from Bomun service reservoir to the Kyongju service reservoir booster pumping station;
(iv) 8.4 km, 300 mm reducing to 100 mm distribution network for the Bomun tourist resort area including a small booster pump for the golf course;
(v) a 115 l/sec water treatment plant and intake pipeline to the Duck-Dong Lake intake tower. The treatment plant design would be similar to the Kyongju plant.

12. The transmission pipeline capacity is designed for conveying 170 l/sec from Bomun to Kyongju in the next stage. Because of difficult rocky terrain and so as not to disturb historical monuments, a single pipeline is provided.

Sewerage - Bomun Resort

13. Sewage collected from the Bomun resort complex of hotels, commercial and recreational areas and residences will flow to a sewage pumping station to be lifted into an outfall sewer and treatment plant at Hwang Seong northeast of Kyongju City. The facilities include:

(i) a sewage collection network of about 4 km including manholes;
(ii) three small lift stations for the commercial, entertainment and transportation areas;
(iii) a main sewage lift station;
(iv) 9.6 km gravity outfall sewer, 600 mm dia.; and
(v) treatment by aerated lagoons at Hwang Seong.

14. During detailed review when preparing the final design, more economical sizes would be chosen for some of these components. Concrete pipe is proposed for the sewers of diameters 300 mm and upwards. The effluent would be piped into the Hyung San River.

Sewerage - Kyongju City

15. An interceptor sewer laid on the east bank of the Hyung San river would collect sewage from downtown Kyongju City. A sewage pumping station would lift sewage from the interceptor into an outfall sewer leading to the treatment works at Hwang Seong.

16. The facilities included in the project for Kyongju are:

(i) a sewage collection network of about 15 km for downtown Kyongju City;
(ii) 2.8 km interceptor sewer of diameter varying from 700 mm to 1000 mm;
(iii) a sewage pumping station;
(iv) 1.3 km outfall sewer diameter 1100 mm; and
(v) treatment by aerated lagoons at Hwang Seong.

17. During detailed review when preparing the final designs economical sizes would be chosen for most of these components. House connections and the laying of sewers in lanes would be paid for by property owners and constructed by Kyongju Municipality.

Solid Waste - Bomun and Kyongju

18. KCG would collect, segregate and dispose solid wastes in sanitary fill at selected areas of Kyongju. The equipment presently used by the refuse disposal bureau of the Municipality would be strengthened by 8 new trucks procured under the project. The segregation of garbage and waste would be accomplished manually by small time traders and farmers who would salvage all useful items. The hotels are expected to incinerate some of the refuse such as waste paper.

C. Cost Estimates

19. The estimated cost of water supply, sewerage, solid waste disposal are summarized in Annex I, Tables 2.3, 2.4 and 2.5. The estimates are based on designs prepared by Korean Engineering Consultants Corporation (KECC). Following a review of the designs by outside consultants there may be cost savings during detailed design. There may be other cost savings if groundwater proves to be a possible supplementary source of water. The cost estimates are based on Korean cost of goods and civil works on recent tendered prices by contractors. A price contingency allowance of 7% per year and physical contingency of 15% for water supply and 20% for sewerage have been assumed; these provisions should be adequate. Design costs are estimated at 3% of construction costs, and the cost of construction supervision is estimated at 6%.

D. Procurement and Project Execution

20. All contracts for the supply of equipment would be subject to international competitive bidding. In view of the fact that only local contractors are likely to submit bids for civil work, only national competitive bidding would be required.

21. KCG would employ KECC to design the project. KECC would employ outside consultants to review the preliminary engineering studies and assist with the design.

E. Institutional Aspects

22. KCG presently operates the existing water supply for Kyongju City as part of its municipal functions and keeps records for financial transactions in accordance with the prescribed Government accounting system. The revenues and expenditures for water supply are recorded separately as "special fund" transactions, the same as revenues and expenditures for housing development and the farmers' lending program.

23. Organizationally water supply operations are integrated into the other functions of KCG; the small water supply operating staff of about 13 is a section of the City Planning Department. The accounts are kept by the Budget and Planning Dept., while construction work is the responsibility of the Construction Department. Collection of bills for water supply is the responsibility of the 40 "village" administrations, which are subsections of KCG; this system appears to have worked quite satisfactorily since there are practically no uncollected water bills.

24. The Mayor is a well-experienced administrator, and the staff of KCG is capable and efficient. The water losses which are estimated at 42% are mainly due to leaking water mains damaged by heavy military traffic. A well planned program of leak detection and relaying of water mains has already been started by KCG and is expected to reduce water losses to about 30% within the next few years.

25. While the present organization of water supply operations was adequate to handle a system serving between 2,500 and 4,000 connections, the increasing responsibility to expand the water supply system both for the city and for the Bomun lake area, and the addition of sewerage services for both areas would require a larger number of staff with appropriate qualifications. KCG therefore has established a separate Water and Sewerage Division within the City Government. (A list of the proposed staff positions is attached, Table 1).

F. Financial Aspects

Present Financial Position

26. KCG does not maintain accounting records for the water supply operations which readily provide information about the past financial results of these operations. Proforma financial statements have therefore been constructed from the available information about the "special fund" transactions for the past three years. These statements (see Tables 2, 3 and 4) indicate that KCG's water operations have had quite satisfactory financial results with rates of return ranging from about 12% - 19%. This is mostly due to the fact that the existing assets have already been written off, since they were built about 40 years ago. Most noticeable, however, is the fact that water bills are collected currently and operating costs are well covered, leaving an adequate operating profit to cover interest and debt service payments on the small amount of long-term loans. It is further noteworthy that records are meticulously kept and a businesslike procedure is adhered to in dealing with revenue producing activities of the municipality.

27. The major deficiency in the present financial control of the water supply operations is the absence of audit arrangements. With the establishment of a separate Water and Sewerage Division within KCG, the regular preparation and audit of financial statements in accordance with sound public utility principles needs to be instituted. KCG should therefore be required to engage management consultants to establish an accounting system for the new department and to make proposals for appropriate staffing of the accounting and finance section. Because of the relatively small scale of present operations the first set of financial statements along commercial lines could be prepared for the fiscal year ending December 31, 1974 with comparative statements for 1973. From January 1, 1975 onwards annual audits of KCG's Water and Sewerage Div. by independent commercial auditors should be required. In addition, appropriate Government audit arrangements should be made for KCG's other municipal activities.

Financing Plan

28. The financing plan for the water supply, sewerage and waste disposal project can be summarized as follows:

		Won - million -	US$ - million -
Requirements			
KCG- Water supply		1243.2	3.1
- Sewerage and Waste Disposal		1334.5	3.3
Duck Dong Dam Facilities - (to be transferred from ADC to KCG upon completion)		1622.1	4.1
Interest during construction capitalized by KCG		319.2	.8
Working capital		94.0	.3
		4613.0	11.6
Sources of Funds			
IBRD Loan			
KCG	1313.8		
Transfer from ADC	751.2	2065.0	5.2
Government contribution			
KCG	1030.1		
Transfer from ADC	870.9	1901.0	4.8
Internal funds		647.0	1.6
- including development charge from KTA:	303.0		
		4613.0	11.6

29. The Government contribution would be made available through budget allocations to KCG and ADC. Upon completion of construction ADC would transfer the Duck Dong Dam assets to KCG along with the liability for the proceeds from the Bank loan and the accrued Government contribution. Appropriate arrangements between ADC and KCG would be required in the subsidiary loan agreements between the Government, and KCG and ADC. It has been assumed that all Government contributions would be made without repayment conditions or interest charges.

Future Financial Results

30. A projection of the financial results of KCG's water supply, sewerage and waste disposal operations (see tables 2, 3 and 4) indicates that services could be provided to both Kyongju city and the Bomun lake area at acceptable utility rates which would produce satisfactory debt service ratios and rates of return. The financial projections are based on a number of assumptions which are listed in the Notes to Tables 2 - 4.

31. One of the main assumptions is the rate structure for water and sewerage services in the city and in the hotel area. The financial results shown in the attached tables are based on a suggested rate of Won 100 per m^3 of water for hotel water supply and a surcharge of Won 50 per m^3 for hotel sewerage services. The rates for water supply in the city of Kyongju would remain at their present level of Won 20.0 per m^3 (ranging from Won 16 to Won 40 for various classes of users). The sewerage charges for the City are proposed to be Won 20 per m^3 for all water consumers connected to the new sewerage system and a surcharge of Won 10 per m^3 for all water consumers not connected.

32. The development contribution included in KCG's financial forecast represents payments in lieu of water and sewerage charges to be made by KTA during the development period 1976-1981. These payments are required to provide KCG with adequate earnings during the period when provision of water and sewerage services for the Bomun resort area would not yield sufficient revenue without excessively high water and sewerage charges to the hotels during the initial period. The direct user charges for these services have therefore been designed in accordance with the demand expected at full development of the resort area in 1982; these charges would then provide satisfactory rates of return to KCG (see para 32). In the interim period KTA would pay a total estimated amount of Won 512.0 million in gradually decreasing annual installments. The amount of prepayments to KCG would later be recovered as part of the charges by KTA to the hotels (Annex VIII). This arrangement would avoid any Government subsidies for tourism infrastructure facilities during the development period.

33. These assumed future utility charges would produce overall rates of return on net fixed assets in operation between 7% in 1976 and about 11% in 1982. Water supply and sewerage operations would equally contribute to this satisfactory financial performance. The debt ratio of KCG's Water and Sewerage Division would range between 43% of total capitalization to 29% at the end of the forecast period. The debt service coverage would be equally satisfactory, except for an exceptional year, when it would drop to 1.1 as a result of interest payments on the Bank loan during the construction period; all other years show debt service coverages of 1.7 or better.

34. A peculiar feature of the financial forecast of the KCG Water and Sewerage Division operations is the fact that no expansion program of facilities other than those included in the Bank Project can be taken into account. From 1976 onwards an investment fund therefore will absorb gradually increasing amounts of cash generated from operations. The total amount available for future projects during the period 1976-82 would be about Won 1.2 billion. This is an amount roughly equal to 50% of the combined Water Supply and Sewerage System expenditures (excluding the Duck-Dong Dam) during the period 1974-78. This amount would be available for possible extension of Water Supply and Sewerage Services in Kyongju City, development of additional tourism infrastructure or repayment of capital to the Government, if no immediate use of the funds can be made.

Financial Covenants

35. The financial performance of the KCG Water Supply and Sewerage Division would be controlled by the following financial covenants to ensure that utility charges would cover operating expenses (including adequate depreciation) and produce a reasonable rate of return on net fixed assets in operation:

(i) during the construction period water rates for the City of Kyongju would remain at least at the present level, if necessary adjusted for inflation;

(ii) after completion of this project component water and sewerage rates for the hotel area and the city would be determined in consultation with KTA to allow KCG to earn an overall rate of return on net fixed assets in operation, suitably adjusted for changes in price levels, of 7% for the first four years and 8% thereafter (the rates assumed in the financial forecast would meet these requirements);

(iii) KTA would make an adequate development contribution to KCG in addition to direct user charges during the gradual development of the hotel complex (see para. 28).

36. In order to ensure the continuing financial viability of the Water and Sewerage Division, this division would undertake no other projects during the construction period of the Bank project without the Bank's approval. After completion of the Project, KCG would not incur any long-term debt for the Water and Sewerage Division without the Bank's approval if its net operating revenues should be less than 1.5 times the maximum future debt service requirements on all of the Water and Sewerage Division's long-term debt.

KOREA
KCG - Water and Sewerage Division
Proforma Cash Flow
1974 - 1982

Year ending December 31	1974	1975	1976	1977	1978	1979	1980	1981	1982
					(in million Won)				
SOURCES OF FUNDS									
Net operating income	20.0	46.4	174.3	241.2	316.9	308.7	370.2	397.9	457.2
Depreciation	1.0	4.5	27.0	79.0	81.0	81.0	81.0	81.0	81.0
Cash generated from operations	21.0	50.9	201.3	320.2	397.9	389.7	451.2	478.9	538.2
IBRD loan	265.8	690.6	255.3	853.3	-				
Gov't contribution	320.0	530.0	70.0	739.5	-				
TOTAL SOURCES OF FUNDS	606.8	1,271.5	626.6	1,913.0	397.9	389.7	451.2	478.9	538.2
APPLICATION OF FUNDS									
Water supply	391.8	486.7	269.6	75.0					
Sewerage and waste disposal	184.9	742.8	180.4	105.0					
Total project[1/]	576.7	1,229.5	450.0	180.0	-				
Duck Dong Dam project				1,622.1					
Increase in working capital other than cash	5.0	9.0	70.0	10.0	10.0	10.0	-	-	-
Sub-total	581.7	1,238.5	520.0	1,812.1	10.0	10.0	-	-	-
Debt service									
Interest - existing loans	.3	.2	.2	.2	.1	.1	.1	.1	-
- IBRD loan	9.6	44.3	78.6	91.5	95.2	140.0	139.0	132.0	125.0
Sub-total	9.9	44.5	78.8	91.7	95.3	140.1	139.1	132.1	125.0
Amortization - existing loans	.6	.6	.3	.3	.3	.3	.3	.3	.3
- IBRD loan						88.0	89.0	96.0	103.0
Sub-total	.6	.6	.3	.3	.3	88.3	89.3	96.3	103.3
Total debt service	10.5	45.1	79.1	92.0	95.6	228.4	228.4	228.4	228.3
Total application of funds	592.2	1,283.6	599.1	1,904.1	105.6	238.4	228.4	228.4	228.3
Net cash balance	14.6	(12.1)	27.5	8.9	292.3	.3	222.8	250.5	309.9
Accumulated cash	15.6	3.5	31.0	39.9	332.2		.3	.8	.7
Debt Service Coverage:	2.0	1.1	2.5	3.5	4.2	1.7	2.0	2.1	2.4

1/ Excluding land acquisition in 1973: ₩ 141 million

KOREA
KCG - Water and Sewerage Division
Proforma Income Statements 1970 - 1982

Year ending December 31	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Kyongju Water Supply													
Water production (in m^3 000)	2,190	2,331	2,642	2,658	2,664	3,195	3,651	3,959	3,983	4,185	4,404	4,571	5,347
Unaccounted for water (in m^3 000)	1,045	1,072	1,162	1,116	1,119	1,278	1,387	1,425	1,354	1,339	1,321	1,371	1,604
(in %)	48	46	44	42	42	40	38	36	34	32	30	30	30
Water sales (in m^3 000)	1,145	1,259	1,480	1,542	1,545	1,917	2,264	2,534	2,629	2,846	3,083	3,200	3,743
Total population in Kyongju	90,365	94,005	114,000	118,000	121,000	125,000	130,000	136,000	142,000	148,000	154,000	161,000	168,000
% Population served	47	46	38	38	38	38	42	44	44	44	46	48	49
No. of water connections	3,296	3,967	4,676	5,000	5,300	5,600	6,800	8,000	9,000	10,000	11,000	12,000	13,000
Average rate per m^3 (in Won)	16	18	19	20	20	20	20	20	20	20	20	20	20
Bomun Area Water Supply													
Water production (in m^3 000)						250	706	1,059	1,294	1,764	2,235	2,823	3,530
Unaccounted for water (in m^3 000)						82	106	159	194	264	335	423	530
Unaccounted (in %)						20	15	15	15	15	15	15	15
Water sales (in m^3 000)						200	600	900	1,100	1,500	1,900	2,400	3,000
Number of hotel rooms						-	600	900	1,100	1,500	1,900	2,400	3,000
Average rate per m^3 (in Won)						100	100	100	100	100	100	100	100
Kyongju Sewerage System													
Total number of sewer connections							1,000	2,000	2,750	3,500	4,000	4,500	5,000
Annual water consumption 000 m^3 (rate 20 Won p/m^3)							238	444	569	707	804	958	1,085
Total number of unconnected houses							5,800	6,000	6,250	6,500	7,000	7,500	8,000
Annual water consumption 000 m^3 (rate 10 Won p/m^3)							1,342	1,334	1,290	1,319	1,406	1,597	1,742
Bomun Sewerage System													
Total number of sewer connections (rate 50 Won p/m^3)							5	10	20	30	40	50	60
Revenue						(in million Won)							
Water sales - Kyongju	18.2	23.1	28.0	30.8	30.9	38.3	45.3	50.7	52.6	56.9	61.7	64.0	75.0
Water sales - Bomun						20.0	77.0	90.0	146.0	154.0	190.0	240.0	300.0
KTA development contribution							22.0	107.0	107.0	80.0	52.0	27.0	
Other water revenue							5.0	5.0	5.8	7.5	9.0	9.5	11.0
Total water revenue	18.2	23.1	28.0	30.8	30.9	58.3	149.3	252.7	311.4	298.4	342.7	340.5	386.0
Sewerage charges - Kyongju							18.2	22.2	24.3	27.3	30.1	35.1	39.1
Sewerage charges - Bomun							30.0	45.0	55.0	75.0	95.0	120.0	150.0
KTA development contribution							30.0	26.0	23.0	18.0	13.0	7.0	
Other revenue							15.1	18.1	30.9	23.8	26.4	28.1	30.4
Total sewerage & waste disposal revenue							93.3	111.3	133.2	144.1	164.5	190.1	219.5
TOTAL REVENUE	18.2	23.1	28.0	30.8	30.9	58.3	242.6	365.0	444.6	442.5	507.2	530.6	605.5

KOREA
KCG - Water and Sewerage Division
Proforma Income Statements 1970 - 1982

Year ending December 31	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Operating Costs						(in million Won)							
Water Supply - Operating Expenses	5.2	8.2	9.4	9.9	9.9	22.4	22.0	22.0	22.0	24.9	25.9	29.0	31.3
Water Supply - Depreciation	-	-	-	1.0	1.0	4.5	15.0	53.0	53.0	53.0	53.0	53.0	53.0
Sub-total	5.2	8.2	9.4	10.9	10.9	26.9	37.0	75.0	75.0	77.9	78.9	82.0	84.3
Sewerage and Waste Disposal Operating Expenses							19.3	21.8	24.7	27.9	30.1	32.7	36.0
Sewerage and Waste Depreciation							12.0	26.0	28.0	28.0	28.0	28.0	28.0
Sub-total							31.3	47.8	52.7	55.9	58.1	60.7	64.0
Total Operating Expenses	5.2	8.2	9.4	9.9	9.9	22.4	41.3	43.8	46.7	52.8	56.0	61.7	67.3
Total Depreciation				1.0	1.0	4.5	27.0	79.0	81.0	81.0	81.0	81.0	81.0
Total Operating Costs	5.2	8.2	9.4	10.9	10.9	26.9	68.3	122.8	127.7	133.8	137.0	142.7	148.3
Net Operating Income													
Water Supply	13.0	14.9	18.6	19.9	20.0	31.4	112.3	177.7	236.4	220.5	263.8	258.5	301.7
Sewerage and Waste Disposal							62.3	63.5	80.5	88.2	106.4	139.4	155.5
Other Income						15.0							
Total Net Operating Income	13.0	14.9	18.6	19.9	20.0	46.4	174.3	241.2	316.9	308.7	370.2	397.9	457.2
Interest	.5	.4	.4	.3	9.9	44.5	78.8	91.7	95.3	140.1	139.1	132.0	125.0
Interest capitalized	-	-	-	-	9.6	44.3	78.6	91.5	95.2	-	-	-	-
Net Interest	.5	.4	.4	.3	.3	.2	.2	.2	.1	140.1	139.1	132.0	125.0
Net Income	12.5	14.5	18.2	19.6	19.7	46.2	174.1	241.0	316.8	168.6	231.1	265.9	332.2
Rate of Return (in %)													
Water Supply	16.8	19.3	12.0	13.0	13.1	31.4	8.6	8.0	7.5	7.1	8.6	8.6	10.1
Sewerage and Waste Disposal							5.4	5.2	6.2	6.8	8.4	11.3	12.9
Overall Rate of Return	16.8	19.3	12.0	13.0	13.1	15.7	7.1	7.0	7.1	7.0	8.6	9.4	10.9
Average Net Fixed Assets in Operation													
Water Supply	77.0	77.0	116.0	154.0	153.0	200.0	1,301.0	2,225.0	3,147.0	3,118.0	3,063.0	3,011.0	2,959.0
Sewerage & Waste Disposal							1,160.0	1,222.0	1,294.0	1,290.0	1,262.0	1,234.0	1,205.0
Total							2,461.0	3,447.0	4,441.0	4,408.0	4,325.0	4,245.0	4,164.0

ANNEX V
Table 2.2

ANNEX V
TABLE 5

KOREA
KCG - Water and Sewerage Division
Proforma Balance Sheets 1970 - 1982
(mill. Won)

Years ending December 31	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
ASSETS													
Fixed Assets													
Water Supply	77.1	77.1	155.0	155.0	155.0	255.0	1,323.1	3,224.7	3,271.7	3,271.7	3,271.7	3,271.7	3,271.7
Less: Accumulated Depreciation				1.0	2.0	6.5	21.5	74.5	127.5	180.5	233.5	286.5	339.5
	77.1	77.1	155.0	154.0	153.0	248.5	1,301.6	3,150.2	3,144.2	3,091.2	3,038.2	2,985.2	2,932.2
Sewerage							1,172.0	1,322.0	1,370.2	1,370.2	1,370.2	1,370.2	1,370.2
Less: Accumulated Depreciation							12.0	38.0	66.0	94.0	122.0	150.0	178.0
							1,160.0	1,284.0	1,304.2	1,276.2	1,248.2	1,220.2	1,192.2
Work in Progress	-			171.4	757.7	1,931.5	220.0	62.0	62.0	62.0	62.0	62.0	62.0
Investment Fund		10.0					34.7	25.0	318.0	470.0	690.0	940.0	1,250.0
Current Assets													
Inventory	4.5	4.5	4.5	5.0	5.0	8.0	20.0	20.0	22.0	26.0	28.0	31.0	33.0
Accounts Receivable				-	5.0	14.0	84.0	94.0	104.0	114.0	114.0	114.0	114.0
Cash	1.1	5.3	1.7	1.0	15.6	3.5	15.0	14.9	14.2	13.5	16.3	16.8	16.7
TOTAL ASSETS	82.7	96.9	161.2	331.4	936.3	2,205.5	2,835.3	4,650.1	4,968.6	5,052.9	5,196.7	5,369.2	5,600.1
CAPITAL AND LIABILITIES													
Current Liabilities	-	-	-	-		3.0	15.0	15.0	17.0	21.0	23.0	26.0	28.0
Long-term Loans													
IBRD					265.8	956.4	1,211.7	2,065.0	2,065.0	1,977.0	1,888.0	1,792.0	1,689.0
Other	5.5	4.9	4.3	3.6	3.0	2.7	2.3	2.0	1.7	1.3	1.0	.7	.3
	5.5	4.9	4.3	3.6	268.8	959.1	1,214.0	2,067.0	2,066.7	1,978.3	1,889.0	1,792.7	1,689.3
Government Capital	64.7	65.0	111.7	262.0	582.0	1,111.7	1,281.8	2,021.3	2,021.3	2,021.3	2,021.3	2,021.3	2,021.3
Government Contributions	12.5	27.0	45.2	65.8	85.5	131.7	324.5	546.8	863.6	1,032.3	1,263.4	1,529.2	1,861.5
Earned Surplus	77.2	92.0	156.9	327.8	667.5	1,243.4	1,606.3	2,568.1	2,884.9	3,053.6	3,284.7	3,551.5	3,882.8
TOTAL CAPITAL AND LIABILITIES	82.7	96.9	161.2	331.4	936.3	2,205.5	2,835.3	4,650.1	4,968.6	5,052.9	5,196.7	5,369.2	5,600.1
Debt: Equity Ratio	7:93	5:95	3:97	1:99	29:71	43:57	43:57	45:55	42:58	39:61	36:64	34:66	30:70

KOREA
KCG Water and Sewerage Division
Assumptions for Financial Projections

Cash Flow

1. It has been assumed that KCG would be directly responsible for construction of the water supply, sewerage and waste disposal project and that all capital expenditures would be made directly by KCG. It has further been assumed that ADC would construct the Duck Dong dam and transfer all capital expenditures allocated to water supply to KCG upon completion, now expected early in 1977.

2. Working capital requirements have been calculated as roughly one-fourth of annual billing.

3. It has been assumed that the proceeds of the Bank loan would be relent to KCG at 7.25% 20 years repayment including 5 years' grace.

4. Land acquisition cost in the amount of Won 141 million have been assumed to be included in KCG's 1973 accounts.

5. No repayment of or interest on Government contributions has been assumed.

Income Statements

6. The projection of water sales in Kyongju City is based on population forecasts assuming a natural growth rate of 2.5%, similar to the national growth rate, and immigration of up to 80% of the estimated additional employment generated by the Bomun tourist resort. The percentage of population served has been assumed to increase from presently 38% to 42% following completion of the Tabdong treatment plant in 1975. After that annual increases of 2% have been assumed.

7. Per capita water consumption in Kyongju has been estimated at 74 lpcd presently with an increase of 2 lpcd for each year. As a result of the leak detecting program already started by KCG the percentage of unaccounted for water has been assumed to decrease from presently 42% to 30% by 1980. The total number of water connections in Kyongju has been assumed to double within the next six years.

8. Of some 9,000 houses in Kyongju City half have water connections at present. When the sewerage scheme is commissioned about 2,000 houses and shops in downtown Kyongju would be connected in the first two years, after which the number of new connections has been assumed to decrease to 750 for two years and 500 per year thereafter.

9. The consumption of water in the Bomun hotel area has been conservatively estimated at 1,000 m3 per hotel room per annum. This is roughly equivalent to 2,800 lpd per hotel room, a consumption level which now prevails at leading hotels in Seoul. This estimate takes

into account water consumption for employees and daytime visitors, and at recreational facilities.

10. The number of sewer connections in Bomun has been assumed to increase gradually from initially 10 in 1977 to 60 in 1982.

11. The average water rate per m^3 applying to consumption in Kyongju has been assumed to remain constant throughout the forecast period.

12. For the Bomun area a water rate of Won 100 per m^3 has been used, which is 2.5 times the water rate applying now to commercial water use in the city.

13. The following sewerage rates have been used:

(i) Connected houses in Kyongju - Won 20 p m^3 of water consumption;
(ii) Unconnected houses in Kyongju - Won 10 p m^3 of water consumption;
(iii) Hotels and other facilities in Bomun - Won 50 p m^3 of water consumption.

The water consumption for connected and unconnected houses in Kyongju was estimated to be between 200 and 238 m^3 per house (averaging about 600 lpd).

14. Operating costs for both water supply and sewerage are based on a detailed calculation of personnel expenses, chemicals, electricity and maintenance costs which appear reasonable. The following breakdown illustrates the composition of operating costs in 1982:

	Water Supply	Sewerage & Waste Disposal
	(in '000 Won)	
Labor cost	6,300.0	2,000.0
Power & fuel	11,740.0	1,178.0
Chemicals	3,773.0	8,188.0
Maintenance	7,000.0	4,500.0
Other expenses (including solid waste)	2,500.0	20,208.0
Total operating expenses	31,313.0	36,074.0

The average labor cost per employee was assumed to be Won 25,000 p.m.; the average electricity rate 5 Won per KW; the unit cost of chemicals Won .49 p m^3. These rates are consistent with present costs per unit.

15. Depreciation has been charged on a straightline basis assuming the following rates for major categories of assets:

Civil works	1.5%
Equipment	
Water supply	4.0%
Waste disposal	15.0%
Sewerage	3.0%
Pipelines	2.5%

16. No depreciation has been charged on the irrigation component of the Duck-Dong Dam, since the question of irrigation charges still has to be resolved (Annex IV). The irrigation component has been tentatively estimated to be 17% of the total investment in the Duck-Dong Dam; this is equivalent to a total amount of Won 423.2 million allocated to irrigation.

Balance Sheet

17. The balance sheet of KCG reflects the total investment in water supply, sewerage and waste disposal, plus the allocated portion of capital expenditures on the Duck-Dong Dam.

18. It has been assumed that KCG would take over both assets and liabilities for the Duck-Dong Dam after completion in 1977. The total accumulated Bank disbursements to ADC of Won 751.2 million are therefore included in KCG's eventual liability for the Bank loan of Won 2,065 million.

19. It has been assumed that KCG would maintain adequate cash balances throughout the period and build up an investment fund for future capital expenditures. This fund would reach a level of about Won 1.2 billion in 1982, roughly equivalent to 50% of the new investment under the project during the period 1974-78.

20. It has been assumed that the net balance of inventories and current liabilities would remain constant throughout the period, while accounts receivable would increase roughly in proportion with sales revenue representing about 2½ to 3 months of billings outstanding. In view of the present 100% collection rate, the conservative estimate of future revenue and the relatively minor effect on the long-range estimates of any assumed rate of non-collections, no allowance for bad debts has been made.

KOREA: APPRAISAL OF THE KYONGJU TOURISM PROJECT

ELECTRICITY SUPPLY COMPONENT

A. Scope of the Project

1. The supply of the Bomun resort complex with electricity requires as part of the project:

(a) construction of a transmission line, a transformer sub-station, and the laying of underground distribution cables within the resort area;

(b) provision of street lighting facilities for public areas; and

(c) electrification of five villages located in the vicinity of the resort area.

2. The electricity to be supplied by the Korean Electric Company (KECO) through these facilities to the Bomun resort complex would be provided from KECO's power plants and would constitute a marginal increment to the total system demand. KECO is presently planning to increase its total generating capacity to 6019 MW by 1976, when the maximum demand of the hotels and other facilities in the resort area is estimated to be about 7.5 MW, after which it would increase to 23.4 MW by 1982.

3. The estimate of electric power demand for hotels was calculated on the basis of floor areas for rooms and public areas and for service areas. Based upon present average requirements of hotels in Seoul the demand for lighting, power and air conditioning is estimated to be 120 W per m^2 for rooms and public areas, assuming 50 m^2/room, and 145 W per m^2 for service areas, assuming 20 m^2 proportional per room. In addition, the requirements for public facilities, commercial and residential areas and street lighting were considered properly.

4. KECO would be directly responsible for construction of all facilities under 1 (a) and (c) above, and would also install the street lighting facilities on behalf of KTA. While KECO would be directly responsible for operation of its own facilities, it would maintain the street lighting facilities under contract with KTA.

B. Description of the Project

5. The existing 66 KV sub-station in Kyongju area does not have sufficient capacity to meet the new demand of the tourism project. In addition, the existing equipment is old and out-dated and the site of the sub-station is subject to occasional flooding. Long term development plans of KECO provide for the retirement of this

station. Therefore, a new sub-station needs to be erected for the supply of power to the Bomun Lake area. This station would be located between the city of Kyongju and Bomun Lake and would have sufficient space to eventually allow for supplying the city as well as the tourism project. The portion to be financed within the project is for the Bomun Lake area only and it would meet the demand of 23,400 KW estimated to be required by 1982. A new 154 KV, double circuit transmission line (only one circuit will be installed initially) 9.4 km long will be built to connect the new sub-station to the existing 154 KV system.

6. After step-down to 22.9 KV through two units of 15 MVA transformer, distribution to Bomun Lake area would be by overhead lines and finally by a system of underground cables within the resort area. In addition, overhead lines would be provided for the electrification of five villages (incl. Silla Village) located in the immediate vicinity of the tourism zone.

C. Cost Estimates

7. It is estimated that the total cost of the electricity component, including the supply to the villages, would be about Won 1.530 million of which the foreign exchange cost would be about Won 819 million. These estimates are based on KECO's unit costs for similar systems and appear to be reasonable. A contingency allowance of 15% for physical increase and of 7% per year for price increases during the time of construction has been added and should be adequate. Design costs are estimated at 3% of construction costs and supervision costs at 6%. Details are given in Annex I, Table 2.7.

D. Procurement

8. Local material and equipment is usually purchased in bulk by KECO and then supplied to sub-contractors carrying out work on behalf of KECO. Imported major equipment like transformers switch gears, etc. would be procured through international competitive bidding. If the total amount of certain items seem to be unattractive to international bidding procedure, approval of the Bank for other methods will be sought prior to procurement.

E. Execution of the Project

9. The executing agency for the power component would be KECO which usually arranges for work to be carried out by sub-contractors based on competitive bidding. The "Transmission Substation Construction Office" of KECO is responsible for the construction of power facilities and would despatch supervisors to the site as required. Upon completion of the construction, KECO would also be responsible for the operation and maintenance of the power facilities. Individual consumers would then enter into supply contracts with KECO.

F. Administrative and Financial Arrangements

10. During the construction phase, KECO's activities with respect to the project would be closely coordinated with those of other agencies under the general supervision of KDO's project unit. After the completion of construction, KECO would enter into supply contracts with individual consumers in accordance with its existing regulations.

11. KECO's electricity supply regulations provide that the total construction cost for supply of general services and high tension service shall be borne by KECO except that any amount in excess of stipulated costs per KW shall be contributed by the consumer and shall be partly reimbursed by means of a reduction of electricity charges. It is proposed that KECO would avail itself of this provision in its regulations to the extent that it is providing underground distribution facilities specifically for the Bomun resort area.

12. KTA, although not being the only ultimate consumer, would assume the responsibility of making the required capital contribution. The net contribution, in the amount of about W 814 million, would constitute deferred charges which KTA would need to amortize against revenue from the hotels in the form of annual charges and lease rents (see Annex VIII). In addition, KTA would be solely responsible for financing of small lighting facilities and village electrification.

13. The existing regulations of KECO would thus require KTA to contribute about 93% of the distribution component of the electricity supply facilities to KECO as consumer contribution. This contribution would in part be financed by the proceeds of the Bank loan. During negotiations, assurances were obtained that appropriate arrangements between KECO, the Government and KTA would be made to ensure that:

(a) KECO would charge customers in the resort area for electricity supplied in accordance with its regular tariff schedules; and

(b) KECO would receive a capital contribution equivalent to the additional cost of providing distribution lines other than those normally provided under its existing regulations.

G. Financial Position of KECO

14. KECO, which was formed on July 1, 1961, as a result of the merger of three electric utilities, is the national corporation responsible for generation, transmission and supply of electricity in Korea. A summary of basic data on its financial position, existing facilities and scope of operations, is given in Table 1. KECO is operating under authority of the Korea Electric Company Act of 1961, and is owned partly by the Government (more than 50%) and partly by other institutions and private individuals. Foreign loans have been obtained from the Kreditanstalt fuer Wiederaufbau (KfW) and the Asian Development Bank (ADB). So far there have been no loans from the Bank to KECO.

15. Under existing loan agreements with foreign lending institutions, KECO is obligated to consult them in case of changes in the level of electricity tariffs; there is, however, no specific rate covenant requiring minimum rates of return. Assets are revalued annually by special law.

16. KECO's present tariffs produce a rate of return on its overall net fixed assets in operation of about 7.0%. This has been barely adequate during the last few years to achieve a marginal net profit, even though the Government has provided interest subsidies to offset the high interest on local bank loans.

17. KECO's main problem has been its inability to raise equity capital and to generate sufficient internal funds to finance further expansion. For some time to come, debt service on existing foreign loans alone would absorb most of its internally-generated funds, while debt service on local loans and capital expenditures are to be covered mainly by rolling over medium-term local loans and obtaining additional foreign loans.

18. Under these circumstances, it is imperative that the electricity component of the Kyongju Tourism Project -- while representing only a relatively small portion of KECO's future expansion program -- should not place additional burdens on KECO over and above those inherent in its existing operating framework which the Bank would only be able to influence if it were a major source of lending for KECO.

19. Summary financial projections for the electricity component of the Kyongju Tourism Project show that the rate of return on KECO's incremental investment to the system would indeed be better than the present overall rate of return. These calculations are shown in Table 2.

20. The financing plan (1974-78) for the electricity component of the Project can be summarized as follows:

		W millions	US$
Requirements			
Total capital expenditures for electricity component		1,487.5	3.7
Sources of Funds			
IBRD Loan			
Transmission (KECO)	360.9		
Distribution (KTA)	595.1	956.0	2.4
KECO Funds (net of IBRD loan)		217.6	0.5
KTA Funds (net of IBRD loan)		315.2	0.8
Total sources of funds:		1,487.8	3.7

During negotiations, assurances were obtained that funds from KECO and KTA will be made available as required.

KOREA: APPRAISAL OF THE KYONGJU TOURISM PROJECT

ELECTRICITY SUPPLY COMPONENT

STATISTICAL SUMMARY OF KOREA ELECTRIC COMPANY (KECO)

I. OPERATING STATISTICS

1. Existing Facilities (1972)

(a) Installed generating capacity:

Hydro:	341.1 MW
Thermal:	2359.5 MW
Diesel:	245.4 MW
	2946.0 MW

(b) Transmission lines: 7370 circuit km

(c) Distribution lines: 32348 km

2. Development Plan, 1972-75

Increase in generating capacity to: 6019 MW
(See Exhibit A)

3. Power sales and unit system costs:

	1970	1971	1972	1973	1976	1981
Power sales, total: (in mill. kwh)	7,740	8,884	9,992	11,850	18,648	35,665
Unit System Cost: (Won per kwh)	n.a.	7.5	7.4	7.4	6.5	5.4

ANNEX VI
Table 1.2

II. FINANCIAL STATISTICS

1. Balance Sheet as of December 31, 1972: (bill. Won)

Assets	
Electric Plant in Service	278.3
Completed Construction (not classified)	66.2
	344.5
Accumulated Depreciation	77.0
Net Plant in Service	267.5
Construction Work in Progress	79.9
	347.4
Other Property and Investments	4.4
Total Net Fixed Assets	351.8
Cash	2.3
Customer Accounts Receivable	8.9
Inventories	11.3
Other Current Assets	8.1
Total Current Assets	30.6
Other and Deferred Items	34.2
TOTAL ASSETS:	416.6
Liabilities	
Common Stock	72.2
Dividends due to Government	13.9
Legal and Special Reserve	7.5
Capital and Revaluation Surplus	3.7
Unappropriated Earned Surplus	5.8
Total Equity	103.1
Foreign Long-Term Debt	112.8
Domestic Long-Term Debt	99.2
Local Bonds and Other Debt	36.7
Total Long-Term Debt	248.7
Current and Accrued Liabilities	38.2
Miscellaneous and Deferred Credits	20.8
Operating Reserves and Consumer Contributions	5.8
Total Other Liabilities and Credits	64.8
TOTAL LIABILITIES:	416.6

2. Summarized Income Statement for Year Ended December 31, 1972

	(bill. Won)
Revenues from electricity sales	73.5
Other operating revenue	.6
Total Operating Revenue	74.1
Operating Expenses	
Power Production	30.1
Transmission	2.0
Distribution	4.5
Administrative and Other Expenses	10.1
	46.7
Depreciation	10.8
Total Operating Expenses	57.5
Net Operating Income	16.6
Other Income	1.9
Total Income	18.5
Interest on Long-Term Debt	21.0
less Interest Capitalized	8.0
Total Income Deductions	13.0
Net Income	5.5

3. Financial Ratios (as of December 31, 1972)

Debt:Equity Ratio	70:30
Rate of Return on Average Net Electric Plant in Service	7%
Interest Coverage (before capitalization of interest during construction)	.9
Debt Service Coverage (Debt service on all long-term debt: net cash generation)	.5

ANNEX VI
Table 2

K O R E A
KECO ELECTRICITY SUPPLY COMPONENT
SUMMARY FINANCIAL PROJECTION

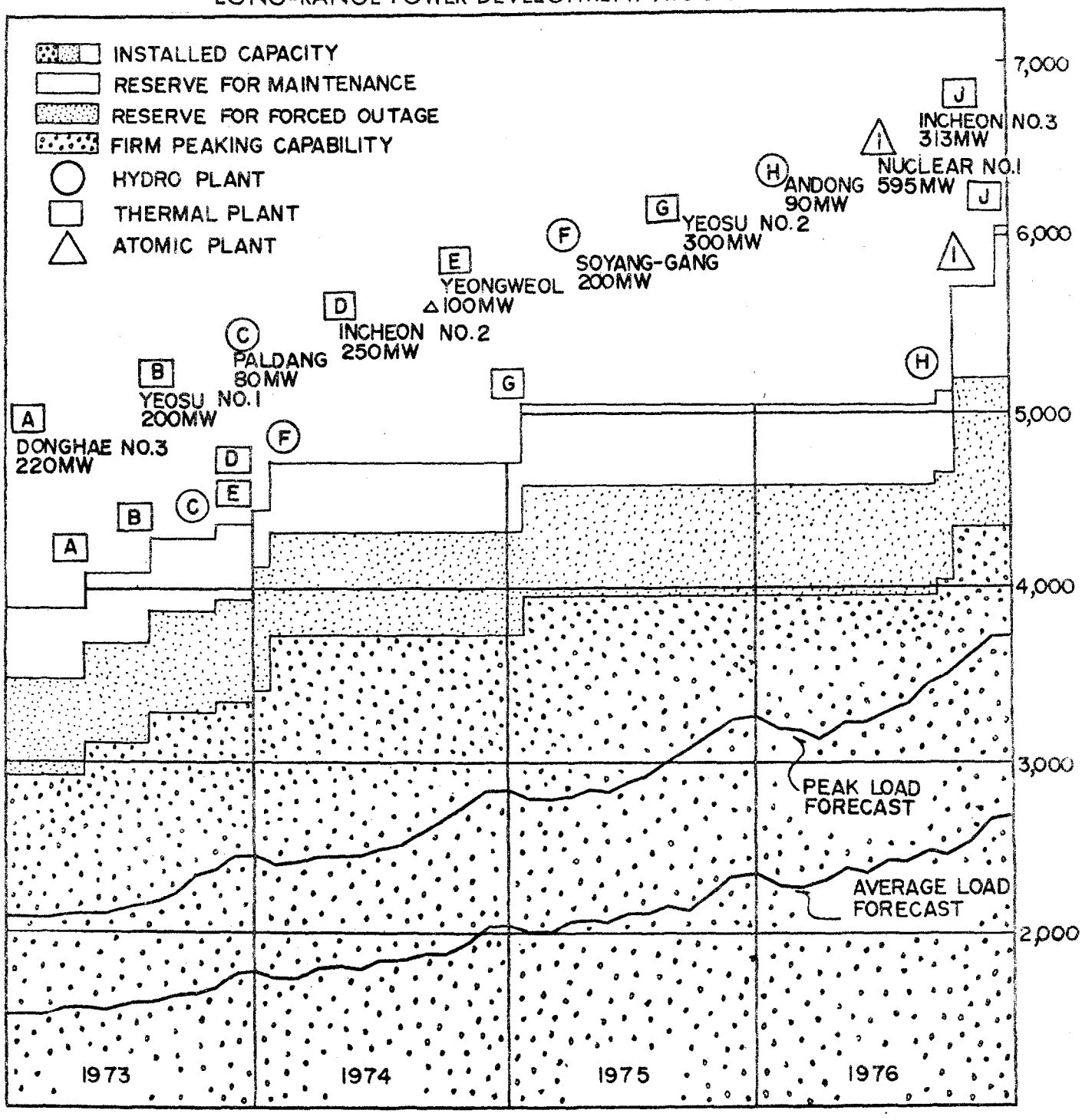
	1976	1977	1978	1979	1980	1981	1982
ELECTRICITY CONSUMPTION (in Gwh)							
General Load	8.0	8.4	8.8	9.4	10.0	10.8	11.3
Hotels	13.4	20.1	24.6	33.6	42.5	53.7	67.2
Street lighting	2.4	2.4	2.4	2.4	2.6	2.6	2.6
Total Consumption	23.8	30.9	35.8	45.4	55.1	67.1	81.1
REVENUE Average Rate per kwh				(in mill won)			
General Load (7.4 Won/kwh)	59.2	62.2	65.1	69.6	74.0	79.9	83.6
Hotels (6.9 Won/kwh)	92.5	138.7	166.3	231.8	293.3	370.5	463.7
Street lighting (9.6 Won/kwh)	23.0	23.0	23.0	23.0	25.0	25.0	25.0
Total Revenues	174.7	223.9	254.4	324.4	392.3	475.4	572.3
OPERATING EXPENSES 1/							
Demand Cost	82.0	97.9	105.5	127.3	146.5	161.7	199.7
Energy Cost	75.1	89.7	96.6	116.5	134.1	155.4	182.8
Total Allocation of System expenses	157.1	187.6	202.1	243.8	280.6	317.1	382.5
INCREMENTAL OPERATING INCOME	17.6	36.3	52.3	80.6	111.7	158.3	189.8
INCREMENTAL INVESTMENT 2/ (Net of Depreciation)	277.5	525.5	499.5	473.5	447.5	421.5	395.5
RATE OF RETURN ON INCREMENTAL INVESTMENT (in %)	6.3	6.9	10.4	17.3	25.0	37.6	48.0

1/ Based on projection of unit operating cost taking into account expected decreases in unit costs due to improved efficiency of new plant and transmission facilities.

2/ Excluding investment cost to be contributed by KTA.

KECO

LONG-RANGE POWER DEVELOPMENT PROGRAM



KOREA: APPRAISAL OF THE KYONGJU TOURISM PROJECT

ROADS, BRIDGES AND STORM WATER DRAINAGE COMPONENTS

A. Scope of the Project

1. The Project consists of the construction and/or re-alignment of (i) four roads totalling about 23 km in length to provide access to various historical and scenic sites; (ii) four roads with a total length of about 22 km to provide major access to and within the resort area, and (iii) a secondary road and street network of some 12 km within the resort area itself. The location of these roads is shown on Map 2.

2. The Project provides also for the construction of a proper stormwater drainage system for the resort area at Bomun Lake consisting of open ditches, concrete pipelines of various sizes and outlets.

B. Description of the Project

B.1 Roads and Bridges

3. Bomun Road. This road consists of four different sections:

(a) The first section of 2.7 km length links the city of Kyongju with the proposed resort area. From the city to the entrance of the lake area it is designed as a four-lane road with sidewalks on both sides.

(b) The second section runs from the entrance area along the southwestern shore of the lake to Chondan-ri following the existing gravel road. It is designed as a two-lane road with a 7.0 m wide paved driveway. The length is 3.63 km.

(c) The third section runs from Chondan-ri through the proposed resort area on the eastern side of the Bomun Lake for a length of 3.01 km. As this would be the center of the development complex this section is designed to have a four-lane driveway and sidewalks on both sides similar to section one.

(d) The fourth and last section of Bomun Road continues through gently rolling areas on the northern side of the lake with a length of 2.75 km connecting with section one at the entrance to the resort area, thus,

forming a loop around the lake. Recreational and entertainment facilities are planned for this area. This section of the road is designed as a two-lane road with a 7.0 m wide driveway. Sufficient road reserve would be provided to allow for widening in the future if required.

Bomun Road would require the construction of two small bridges of 15 m and 20 m span and of two larger bridges with a length of 160 m and of 200 m respectively.

4. Bomun Secondary Roads and Streets. These roads form a network to serve the resort facilities in accordance with the layout plan. They would be linked and used as accesses to hotel areas, golf course, marina, traditional Korean restaurant area, etc. Length and width vary according to the layout and proposed traffic amount.

5. Access Roads to Historical Monuments

(a) Yongchi Road. This road serves as access to a recreational area located at the legendary Yongchi, an old, existing water reservoir formed by, presumably, the oldest dam in the area not far from the royal tomb Koenung. The length is 1.38 km with a width of 7.0 m for two-lane traffic.

(b) Koenung Road. The access to the Koenung Royal Tomb is proposed to be improved to a 7.0 m wide driveway at a length of 0.56 km with a parking lot for approximately 50 cars.

(c) Namsan Road No. 2. The major section of this 14.1 km long road passes over Mt. Namsan through rugged topography with steep slopes through a beautiful mountain area. This road is proposed to give access to numerous historical remains in the vicinity of Mt. Namsan and to an existing newly-built look-out. In view of the difficult terrain a design speed of only 35 km/hr is used in the geometric design of the two-lane, 7.0 m wide driveway. The construction of seven small and four comparatively large bridges would be required in connection with the road construction. Approaching the Bulkuk Road the road passes through flat terrain and cultivated land. To cross the river running parallel to Bulkuk Road an existing concrete bridge can probably be used which, at present, is connected to minor tracks only.

(d) Bobul Road. The proposed road would connect the famous Bulguk Temple area with the Bomun resort complex. For a length of 7.12 km with a two-lane 7.0 m wide driveway the road passes mostly through mountainous terrain. Shoulders 2.5 m wide are planned for both sides in order to allow for the possible future provision of sidewalks.

(e) Boduck Road. This road would connect Bomun Road (at Shinpyang-ri) to Duck-Dong North Road and would be designed to accommodate a 7.0 m wide two-lane driveway.

6. Other Roads. The following roadworks are required in consequence of the proposed construction of Duck-Dong Dam and reservoir and their costs have therefore been included in the cost estimate for the dam. Relocation of some parts of existing roads is necessary as they will be submerged in the new reservoir.

(a) Relocation of Road to Kampo. The 4.04 km long section is part of the Kyongju-Kampo road and would have a 7.0 m wide driveway with shoulders on either side. The alignment has to follow a relatively steep mountain side. Four bridges with a span of 60 to 120 m would be required for this section.

(b) Duck-Dong North Road. This road starts at the proposed Duck-Dong Dam and runs parallel to the shore of the new reservoir. It serves as peripheral road and access to the adjoining area and as a basic road for expansion of the tourism zone. As the terrain is mountainous the design allows for a maximum grade of 10% and a speed of 35 km/hr. The driveway would be 7.0 m wide with 1.0 m shoulders on either side. The length would be 2.55 km.

(c) Boduck Road (Part). This section is required in connection with the dam construction in order to support the development of the adjoining area. As described under item 5(e) it is proposed to have a 7.0 m wide two-lane driveway for a length of 1.83 km.

B.2 Stormwater Drainage - Bomun Lake Area

7. As a result of technical and economic studies it is proposed to provide a stormwater system separate from the sewerage system.

8. The stormwater drainage would protect the northeastern side of Bomun Lake where hotels and other tourism facilities are to be constructed, and would discharge stormwater into the lake. It would consist of open drains for the collection of stormwater from the background of the site, concrete pipe lines, laterals and road-side catch basins for the collection of stormwater from built-up areas. In order to avoid (or at least reduce) the content of soil carried by stormwater, check dams would be provided at inlets of the system at the end of valleys and sand traps would be constructed at the outfalls into the lake.

9. The scheme has been designed in accordance with acceptable standards based on rainfall statistics collected at the city of Daegu located close to Kyongju in a similar situation.

C. Cost Estimates

10. The estimated costs of roadworks (including bridges) and stormwater drainage are summarized in Annex I, Tables 2.1 and 2.6. Cost estimates were prepared by KECC, consultants to KDO, and were reviewed during the time of appraisal. Costs are based on Korean cost of goods and civil works. A price increase allowance of 7% p.a. and a physical increase of 15% has been assumed, and these provisions should be adequate. Final engineering costs are estimated at 3% and cost of supervision at 6% of construction costs plus price increase. The total cost (including contingencies) is estimated at US$ 9.1 million for roadworks and bridges and US$ 0.7 million for stormwater drainage.

D. Procurement and Project Execution

11. Contracts for the implementation of roadworks and bridges would be subject to international competitive bidding. For the stormwater drainage, however, it seems to be doubtful whether the volume of work involved would attract foreign bidders and it is therefore proposed that only national competitive bidding should be required.

12. KDO, as part of the Ministry of Construction, would employ consultants to design the project and would be responsible for the implementation of roadworks, bridges and stormwater drainage. For maintenance and operation, however, these elements would be taken over after completion by the Kyongju City Government (KCG).

E. Organizational Aspects

13. While the Kyongju Development Office (KDO) would be responsible for this component of the Kyongju Tourism Project during the construction period, the Kyongju City Government (KCG) would upon completion assume responsibility for operation and maintenance of the facilities.

14. KCG is maintaining at present national highways, regional roads and city roads totalling about 122 km. Although these roads include paved as well as unpaved roads, it can be assumed that the takeover of the new roads would require only slight expansion of its roads maintenance activities. During negotiations assurances were obtained from KCG that the roads under this Project would be adequately maintained and that funds would be provided for this purpose.

F. Financial Aspects

15. The financing plan (1974-77) for the roads and stormwater drainage component of the Project can be summarized as follows:

	Won - million -	US$
Requirements		
Roads and bridges	3638.5	9.1
Stormwater drainage	277.8	0.7
Interest during construction capitalized by KDO	460.0	1.2
	4376.3	11.0
Sources of Funds		
Proceeds of IBRD loan	1711.4	4.3
Government contribution	2664.9	6.7
	4376.3	11.0

The proceeds of the Bank loan and the Government contribution would be made available to KDO through the Ministry of Construction.

16. There would be no direct user charges for this project component so that maintenance costs would have to be covered from general tax revenues. The Kyongju City Government is presently responsible for maintenance of certain national roads, regional roads and city roads, and it receives a share of central government taxes.

17. Despite a formal segregation of functions between central, provincial, county and city governments in Korea, the fiscal autonomy and the decision-making power below the central government is very limited. KCG therefore has to be regarded as a sub-division of the central government and, as such, offers no basis for separate assessment of its financial position.

KOREA

APPRAISAL OF THE KYONGJU TOURISM PROJECT

The Proposed Kyongju Tourism Agency (KTA)

A. Purpose and Scope of Responsibilities

1. The Bomun Lake tourist resort area would be administered by a new organization to be created for the purpose -- the Kyongju Tourism Agency (KTA) -- the key staff of which would be part of the project unit in KDO. KTA would be responsible for maintaining the public areas within the resort (e.g., landscaping, buildings, environmental sanitation and stormwater drainage) and for leasing and/or selling sites and facilities to private investors. It is proposed that in the initial stages KTA would lease shops in the shopping center and such sports facilities as are envisaged. These may subsequently be sold to private investors. Policies regarding the leasing and sale of hotel sites, to be formulated in consultation with the Bank, would be largely conditioned by market factors. In view of the Government's rather large investment in infrastructure facilities, and in light of the expectation of significant increases in land values over time in the Bomun Lake resort area, it is likely that the rate of return to Government would be higher in the long term if the majority of sites are leased rather than sold. It was agreed during negotiations, therefore, that no more than 25% of the Bomun Lake resort area zoned for hotel construction would be sold, except as the Bank may otherwise agree.

2. KTA is envisaged as being a commercially-oriented organization which is structured to provide management, administrative and maintenance services in the Bomun Lake resort area. The organization would be staffed with qualified and experienced technical and administrative officers, including the chiefs of the Property Management, Planning and Engineering and Accounting and Finance Divisions. It would also have a small technical services unit, although the KTA would rely heavily on maintenance services to be provided by the various agencies of the Kyongju City Government. The management services to be provided by KTA would primarily involve land leases, land sales and building management. The administrative services would primarily involve accounting, procurement and disbursements.

3. Initially, the nucleus of KTA would exist as part of the Project Unit within the framework of KDO. Key personnel to be hired at an early stage would include the Director of KTA as well as specialists in the fields of property management, accounting and finance, engineering and promotion. The establishment of KTA would take place before the project becomes operational; however, the nucleus of the organization must be in place when the Project Unit becomes operational.

4. During negotiations, assurances were obtained from the Government that a statement setting out the purposes, the organizational structure and the policies of KTA would be prepared and submitted to the Bank for its approval by July 1, 1974. Agreement was also reached that KTA would be established by January 1, 1975, and that the appointment of its key staff would be made in consultation with the Bank.

B. Proposed Organization

5. The proposed organizational scheme shown in Chart 3 is based on the assumption that the established city organizations would be used to their fullest extent and that consultants would be retained by KTA in order to perform special services.

6. It would be the responsibility of the property management division to establish land prices and lease rents, prepare lease and sales agreements, lease and sell properties, collect lease rents, and manage KTA-owned superstructures. In the preparation of lease and sales agreements, the division would have the benefit of legal advice by outside consultants; professional appraisers would support the division in establishing land values, land prices and lease rents. The management of KTA-owned superstructures would primarily involve maintenance and arrangements for appropriate space allocations.

7. The planning and engineering division would consist of an engineering and a planning/architectural section. Its main responsibilities would be: (a) to control the quality of maintenance of KTA-owned projects, as well as privately owned and operated superstructures; (b) to enter into agreements with contractors; (c) to supervise contractors' performances; and (d) to accept completed maintenance and repair works. The relationships between this section and the various agencies of the City of Kyongju would mainly concern utility and road maintenance.

8. The finance and accounting division would be responsible for procurement, disbursement, financial statements and analyses, budget coordination, and accounting. Divisional budget proposals would be prepared by the respective deputies and submitted to this division by the other division heads. Overall coordination of all budgeting activities would be exercised by the Director.

9. The technical services division would request procurement of KTA-owned equipment and would subsequently maintain such equipment. Maintenance services on other than KTA-owned equipment would be rendered against charges. In addition, the division would be responsible for environmental sanitation and would perform minor maintenance and repair tasks on such facilities as street lighting fixtures, earth works and water works under the direction of the engineering section. Since most of the equipment to be maintained by the division would be used for landscaping maintenance, the landscaping maintenance section has been attached to it.

10. The general administration division would be responsible for the overall quality level of services rendered in the resort area and for its internal security and medical services.

C. Relationships with Other Agencies

11. The relationships between the City Government and KTA would be such that the City would provide maintenance services for roads, bridges, water supply and sewerage systems, solid waste disposal, and stormwater drainage. Electrical installations within the resort area would be maintained by KECO, whilst MC would maintain the telecommunications installations. However, as mentioned above, the respective divisions of KTA would be responsible for the overall quality control of maintenance and repair services, and would plan their activities in close coordination with the City administration.

D. Financial Aspects

Financing Plan

12. The total project cost for the development of the tourist resort area at Bomun is estimated at US$20.40 million, excluding financial charges which is about 41% of the overall project cost of US$50.0 million. The following is a summary financing plan for the development of the Bomun resort area:

	WON	US$ (million)	(%)
Requirements			
Project Cost	7778.5	20.40	(86)
Interest During Construction	1241.8	2.32	(14)
Total	9020.3	22.72	(100)
Sources of Funds			
IBRD	4334.2	10.90	(48)
Government Equity Contribution	3444.3	8.70	(38)
Government Advances	1241.8	3.12	(14)
Total	9020.3	22.72	(100)

13. The IBRD loan is assumed to be on-lent at 7¾% interest for 25 years, including a five-year grace period. Repayment of the IBRD loan of US$ 10.90 million will, therefore, start in 1979, since the first disbursement will be made in 1974. The financial charges on the IBRD loan during the grace period will be covered by the Government. They would be charged to KTA as Government advances, repayable over 20 years.

Operating Projections

14. Forecasts of income and expense, cash flow and financial position for the first ten-year period of KTA's operation are shown in Tables 1, 2 and 3. The basic assumptions used in these projections are summaried below.

15. KTA would generate revenues from the following three major sources: the sale and leasing of hotel sites; the leasing of other properties, such as shops, restaurants, game center, golf course, etc.; and provision of maintenance and other services, for which charges will be made. It was assumed that 25% of the land set aside for hotel sites would be sold and the rest would be leased. Average land sales prices of US$ 40 per m^2 and average annual lease rents of US$ 350 per room for hotel have been assumed. Rents for other superstructure establishments were projected at appropriate percentages (1.5% - 2.0%) of their expected gross revenues. Annual service charges were based on the projected gross operating profits of hotels and other establishments at relatively conservative rates (1.5% - 5.0%).

16. The operating costs include maintenance of the infrastructure facilities in the resort complex, promotional and administrative activities for the resort, and a small amount (US$ 25,000 per year) paid to local agricultural committees as rent for the use of Bomun Lake. On the basis of a depreciation schedule for the various project components to be built in the resort, the annual maintenance costs were estimated at an average of 0.7% of the depreciable total assets. The promotional expenses and administration costs were based on assumed work programs for these activities. Average depreciation on total assets, excluding the cost of land was calculated at 2.4% per annum.

17. The Government would, on behalf of KTA, make development contributions to KCG and KECO. These contributions would be treated as deferred expenses by KTA. Total deferred expenses including project adminstration, promotional expenses and financial charges during construction would amount to Won 1.5 billion. KTA is expected to recover this amount through its charges to the hotels, including the sales proceeds of developed lots, within about ten years.

18. On the basis of the above assumptions, and given the conservative revenue projections made, KTA's financial position would be sound. Despite some losses in the years 1979-80, the financial rate of return (net income before interest as a percentage of total net assets) reaches 7.1% by the time full utilization of the hotels is achieved in 1984. The debt service coverage shown in the cash flow projection is quite satisfactory.

19. In addition to the financial return to KTA in its operation of the resort, the Government is expected to receive substantial tax revenues from hotels and other superstructures. Over the period to 1998, the total tax revenue is estimated to amount to at least US$ 90.0 million in 1973 prices.

20. Because of the nature of KTA's operation, the financial projections do not represent standards of performance which can be regulated by financial covenants such as a rate of return requirement. During negotiations agreement was therefore reached that KTA would formulate in agreement with the Bank financial objectives and regulations governing lease rents, sales prices and service charges. In addition, KTA would have its accounts and financial statements for each fiscal year audited by independent auditors acceptable to the Bank.

KOREA: Kyongju Tourism Project

KTA Income Projection

(in Million Won)

Fiscal Year:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Operating Year:	-	-	1	2	3	4	5	6	7	8	9	10
Revenue												
Land Sales	-	-	373.0	373.0	372.0	-	-	406.0	406.0	-	-	-
Land Leases	-	56.0	98.0	98.0	154.0	210.0	252.2	343.2	343.2	343.2	343.2	343.2
Properties' Lease	-	-	36.8	47.2	47.2	106.8	106.8	133.6	225.2	225.2	225.2	225.2
Annual Service Charges	-	-	50.4	82.4	102.8	149.2	194.0	258.0	326.0	340.4	360.4	360.4
Utility Surcharges	-	-	-	-	-	-	150.0	150.0	150.0	150.0	150.0	150.0
Total	-	56.0	558.2	600.6	676.0	466.0	710.0	1,290.8	1,450.4	1,058.8	1,078.8	1,078.8
Cost of Land Sold	-	-	35.7	35.7	35.7	-	-	38.8	38.8	-	-	-
Operating Costs												
Maintenance	-	-	12.4	24.8	36.8	49.2	49.2	49.2	49.2	49.2	49.2	49.2
Rent for Bomun Lake	-	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Promotion	-	-	20.0	20.0	12.0	12.0	10.0	10.0	8.0	8.0	-	-
Administration	-	29.6	29.6	30.8	32.0	33.2	33.2	33.2	33.2	33.2	33.2	33.2
Total	-	39.6	72.0	85.6	90.8	104.4	102.4	102.4	100.4	100.4	92.4	92.4
Gross Operating Profit	-	16.4	450.5	479.3	549.5	361.6	607.6	1,149.6	1,311.2	958.4	986.4	986.4
(Less)												
Depreciation	-	-	-	-	154.0	154.0	154.0	154.0	154.0	154.0	154.0	154.0
Amortization (KTA)	-	-	-	-	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
Amortization (Utilities)	-	-	-	-	-	-	150.0	150.0	150.0	150.0	150.0	150.0
Total	-	-	-	-	274.0	274.0	424.0	424.0	424.0	424.0	424.0	424.0
Profit Before Interest	-	16.4	450.5	479.3	175.5	87.6	183.6	725.6	887.2	534.4	562.4	562.4
(Less)												
Interest	-	-	-	-	-	424.4	414.8	404.4	393.2	380.8	368.0	354.4
Net Profit												
Annual	-	16.4	450.5	479.3	175.5	(336.8)	(231.2)	321.2	494.0	153.6	194.4	208.0
Cumulative	-	16.4	466.9	946.2	1,121.7	784.9	553.7	874.9	1,368.9	1,522.5	1,716.9	1,924.9
Financial Rate of Return	-	-	5.2	4.9	1.8	0.9	1.9	8.1	10.4	6.5	7.1	7.4

KOREA: Kyongju Tourism Project

KTA Cash Flow Projection

(in Million Won)

Fiscal Year:	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Operating Year:	-	-	1	2	3	4	5	6	7	8	9	10
Source:												
Cash at Beginning	-	-	16.4	502.6	1,017.6	1,502.8	1,305.2	1,203.6	1,682.8	2,323.6	2,572.8	2,850.0
Initial Equity Investment	918.8	1,566.8	752.8	238.8	-	-	-	-	-	-	-	-
IBRD Loans (KTA)	1,027.2	1,900.0	1,068.8	358.4	-	-	-	-	-	-	-	-
Government Advances (KTA)	99.6	222.8	292.4	315.6	315.6	-	-	-	-	-	-	-
Government Advances (Utilities)	244.0	520.0	152.0	221.0	130.0	98.0	65.0	34.0	-	-	-	-
Sub-Total	2,289.6	4,209.6	2,282.4	1,636.4	1,463.2	1,600.8	1,370.2	1,237.6	1,682.8	2,323.6	2,572.8	2,850.0
Net Profit	-	16.4	450.5	479.3	175.5	(336.8)	(231.2)	321.2	494.0	153.6	194.4	208.0
Non-cash Charges	-	-	-	-	274.0	274.0	424.0	424.0	424.0	424.0	424.0	424.0
Sub-Total	-	16.4	450.5	479.3	449.5	(62.8)	192.8	745.2	918.0	577.6	618.4	632.0
Total Funds	2,289.6	4,226.0	2,732.9	2,115.7	1,912.7	1,538.0	1,563.0	1,982.8	2,600.8	2,901.2	3,191.2	3,482.0
Application:												
Project Expenses												
Land	738.8	-	(35.7)	(35.7)	(35.7)	-	-	(38.8)	(38.8)	-	-	-
Building and FFE	1,081.2	3,270.0	1,624.8	518.4	-	-	-	-	-	-	-	-
Pre-opening Expenses	126.0	196.8	196.8	78.8	-	-	-	-	-	-	-	-
Financial Charges	99.6	222.8	292.4	315.6	315.6	-	-	-	-	-	-	-
Sub-Total	2,045.6	3,689.6	2,078.3	877.1	279.9	-	-	(38.8)	(38.8)	-	-	-
Payments to KCG	-	-	52.0	133.0	130.0	98.0	65.0	34.0	-	-	-	-
Payments to KECO	244.0	520.0	100.0	88.0	-	-	-	-	-	-	-	-
Sub-Total	244.0	520.0	152.0	221.0	130.0	98.0	65.0	34.0	-	-	-	-
L/T Loans Repayment												
IBRD Loans	-	-	-	-	-	100.4	107.6	115.2	123.6	132.8	142.4	152.4
Government Advances (KTA)	-	-	-	-	-	34.4	36.8	39.6	42.4	45.6	48.8	52.4
Government Advances (Utilities)	-	-	-	-	-	-	150.0	150.0	150.0	150.0	150.0	150.0
Sub-Total	-	-	-	-	-	134.8	294.4	304.8	316.0	328.4	341.2	354.8
Total Applications	2,289.6	4,209.6	2,230.3	1,098.1	409.9	232.8	359.4	300.0	277.2	328.4	341.2	354.8
Cash at End	-	16.4	502.6	1,017.6	1,502.8	1,305.2	1,203.6	1,682.8	2,323.6	2,572.8	2,850.0	3,127.2
Debt Service Coverage	-	-	-	-	-	0.6	0.9	1.	1.	1.4	1.4	1.4

KOREA: Kyongju Tourism Project

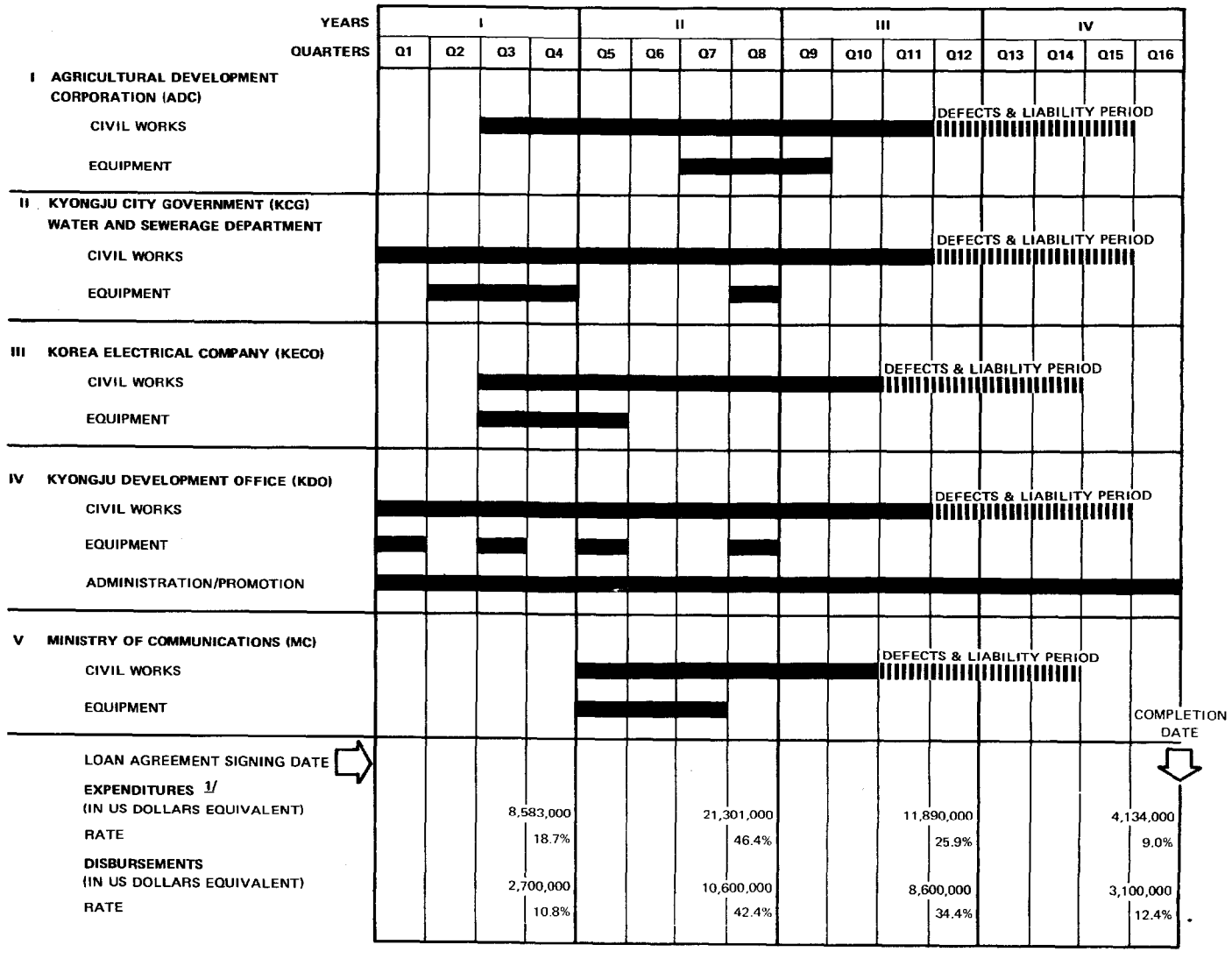
KTA Projected Financial Position

(in million Won)

Fiscal Year: / Operating Year:	1974 -	1975 -	1976 1	1977 2	1978 3	1979 4	1980 5	1981 6	1982 7	1983 8	1984 9	1985 10
Net Working Capital	-	16.4	502.6	1,017.6	1,502.8	1,305.2	1,203.6	1,682.8	2,323.6	2,572.8	2,850.0	3,127.2
Fixed Assets												
Land	738.8	738.8	703.1	667.4	631.7	631.7	631.7	592.9	554.1	554.1	554.1	554.1
Building & FFE	1,081.2	4,351.2	5,976.0	6,494.4	6,340.4	6,186.4	6,032.4	5,878.4	5,724.4	5,570.4	5,416.4	5,262.4
Deferred Expenses (KTA)	225.6	645.2	1,134.4	1,528.8	1,724.4	1,604.4	1,484.4	1,364.4	1,244.4	1,124.4	1,004.4	884.4
Deferred Expenses (Utilities)	244.0	764.0	916.0	1,137.0	1,267.0	1,365.0	1,280.0	1,164.0	1,014.0	979.0	944.0	909.0
Total	2,289.6	6,499.2	8,729.5	9,827.6	9,963.5	9,787.5	9,428.5	8,999.7	8,536.9	8,227.9	7,918.9	7,609.9
Total Net Assets	2,289.6	6,515.6	9,232.1	10,845.2	11,466.3	11,092.7	10,632.1	10,682.5	10,860.5	10,800.7	10,768.9	10,737.1
Long-Term Debt												
IBRD Loans (KTA)	1,027.2	2,927.2	3,996.0	4,354.4	4,354.4	4,254.0	4,146.4	4,031.2	3,907.6	3,774.8	3,632.4	3,480.0
Government Advances (KTA)	99.6	322.4	614.8	930.4	1,246.0	1,211.6	1,174.8	1,135.2	1,092.8	1,047.2	998.4	946.0
Government Advances (Utilities)	244.0	764.0	916.0	1,137.0	1,367.0	1,365.0	1,280.0	1,164.0	1,014.0	979.0	944.0	909.0
Total	1,370.8	4,013.6	5,526.8	6,421.8	6,867.4	6,830.6	6,601.2	6,330.4	6,014.4	5,801.0	5,574.8	5,335.0
Equity	918.8	2,502.0	3,705.3	4,423.4	4,598.9	4,262.1	4,030.9	4,352.1	4,846.1	4,999.7	5,194.1	5,402.1
Represented by:												
Initial Equity	918.8	2,485.6	3,238.4	3,477.2	3,477.2	3,477.2	3,477.2	3,477.2	3,477.2	3,477.2	3,477.2	3,477.2
Retained Earnings	-	16.4	466.9	946.2	1,121.7	784.9	553.7	874.9	1,368.9	1,522.5	1,716.9	1,924.9
Debt/Equity Ratio	60:40	62:38	60:40	59:41	60:40	62:38	62:38	59:41	55:45	54:46	52:48	50:50

ANNEX VIII
Table 3

KOREA: KYONGJU TOURISM PROJECT
SCHEDULES OF IMPLEMENTATION, EXPENDITURES, AND DISBURSEMENTS



1/ Excluding Land Acquisition

August 1973

World Bank—7985(R)

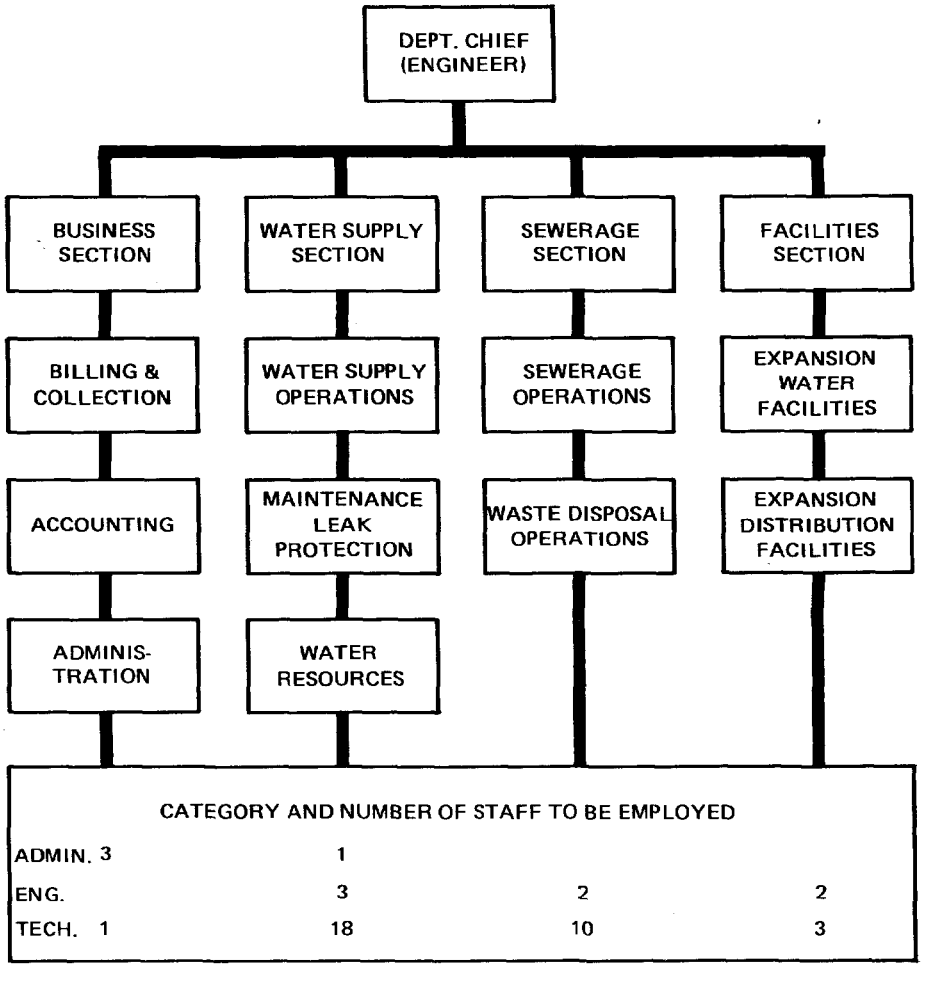
KOREA: KYONGJU TOURISM PROJECT
INTER – AGENCY RELATIONSHIPS

	CATEGORY OF WORKS	EXECUTION *	OPERATION AND MAINTENANCE
AGRICULTURAL SECTOR	Duck-Dong Dam and Irrigation Works	KDO/ADC	ADC/KCG-WSD
URBAN SECTOR	Roads and Bridges Water Supply Sewerage Stormwater Drainage Soild Waste Disposal	KCG-WSD	KCG-WSD
TOURISM SECTOR	Tourism Promotion and Training Roads and Bridges Land Improvement Storm-Water Drainage Environmental Sanitation KTA - Superstructures Golf Course and Clubhouse Landscaping Improvement of Existing Villages Silla Village Reconstruction Street Lighting	KDO → KTA	KTA
	Water Supply Sewerage Solid Waste Disposal	KCG-WSD	KCG-WSD
	Transmission Line Substation Distribution System	KECO	KECO
	Telecommunications	MC	MC

* KDO: Kyongju Development Office
KTA: Kyongju Tourism Agency
KCG-WSD: Kyongju City Government - Water and Sewerage Division
KECO: Korea Electric Company
MC: Ministry of Communications
ADC: Agricultural Development Corporation
FLIA: Farmland Improvement Association

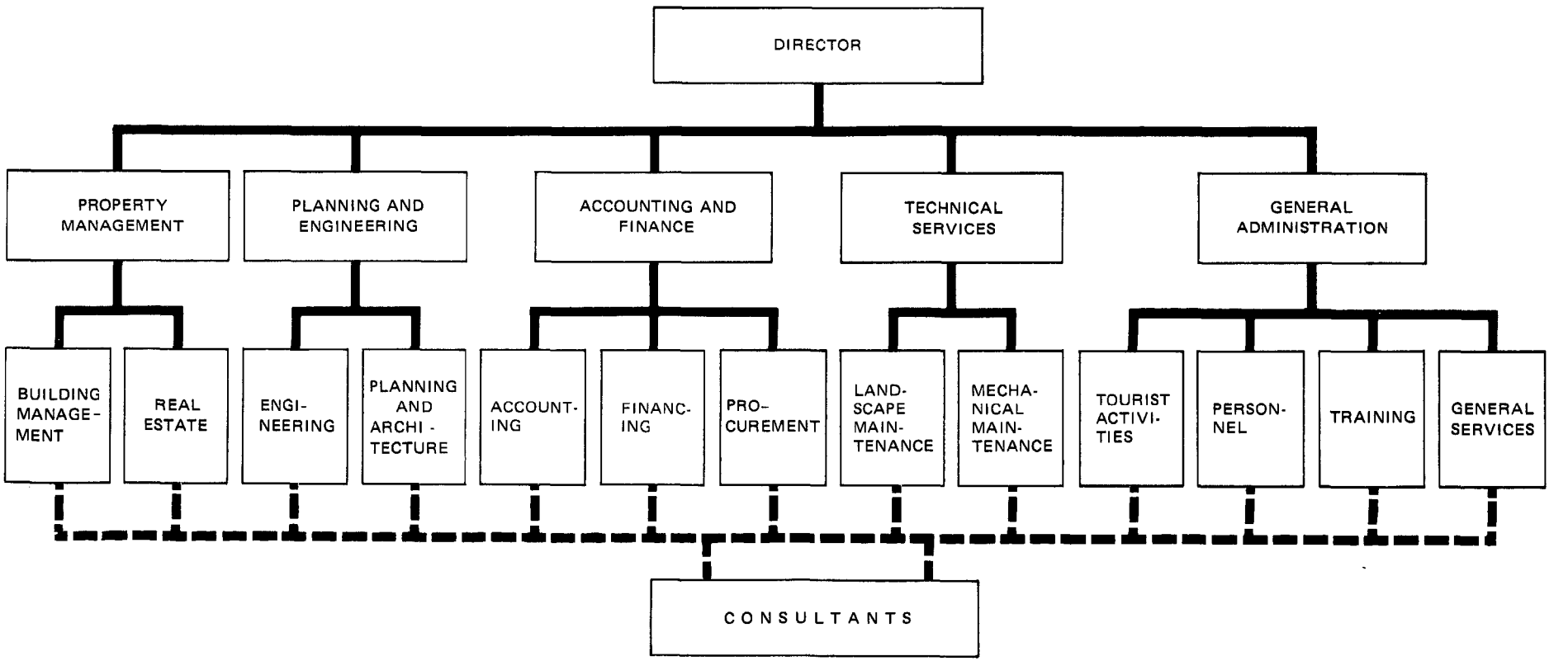
World Bank–7986 (R)

KOREA
KCG – WATER AND SEWERAGE DIVISION



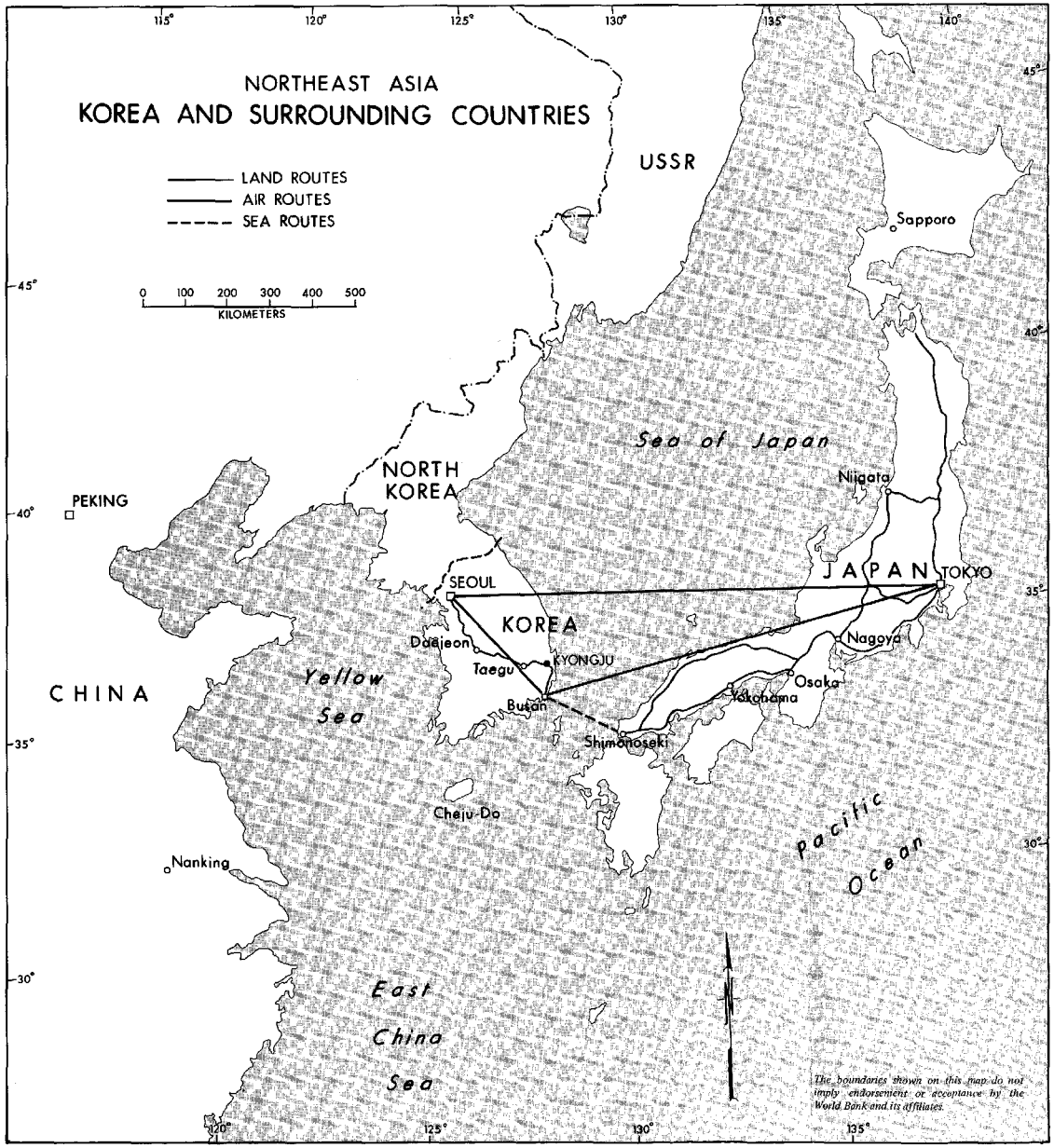
World Bank–8142(R)

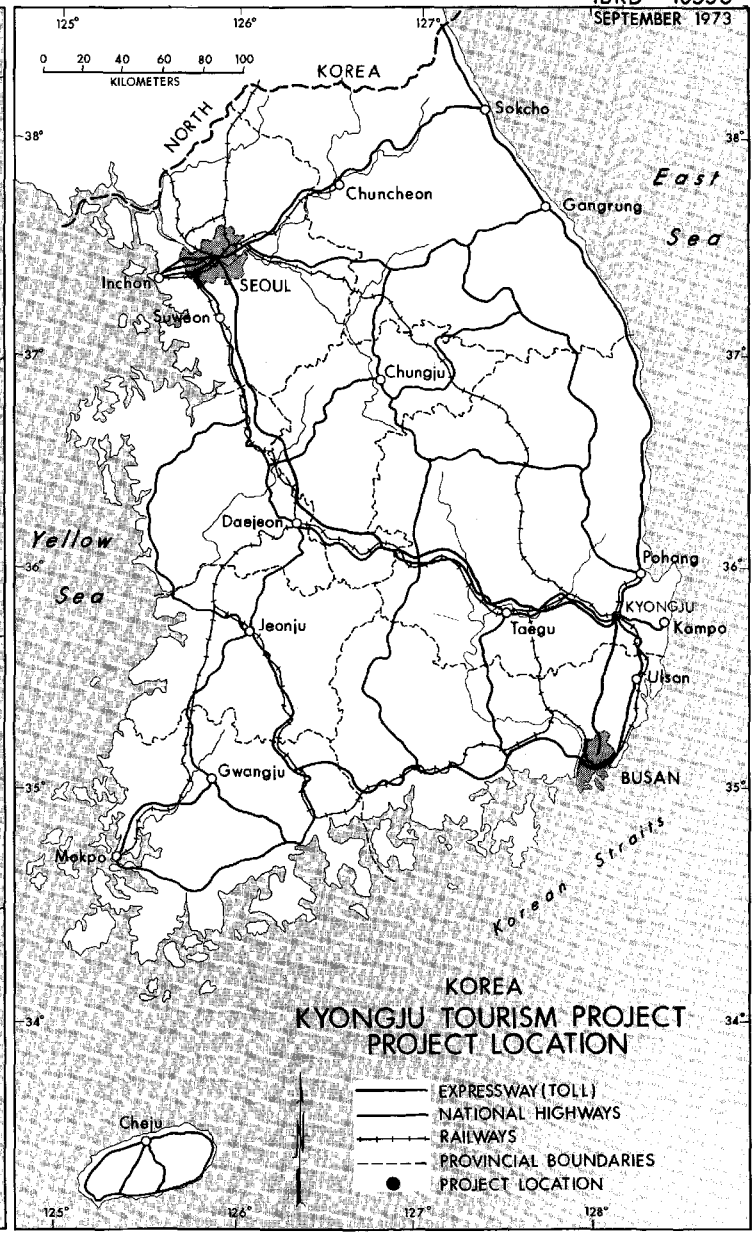
KOREA: KYONGJU TOURISM PROJECT
PROPOSED KTA ORGANIZATION SCHEME



World Bank-7987(R)

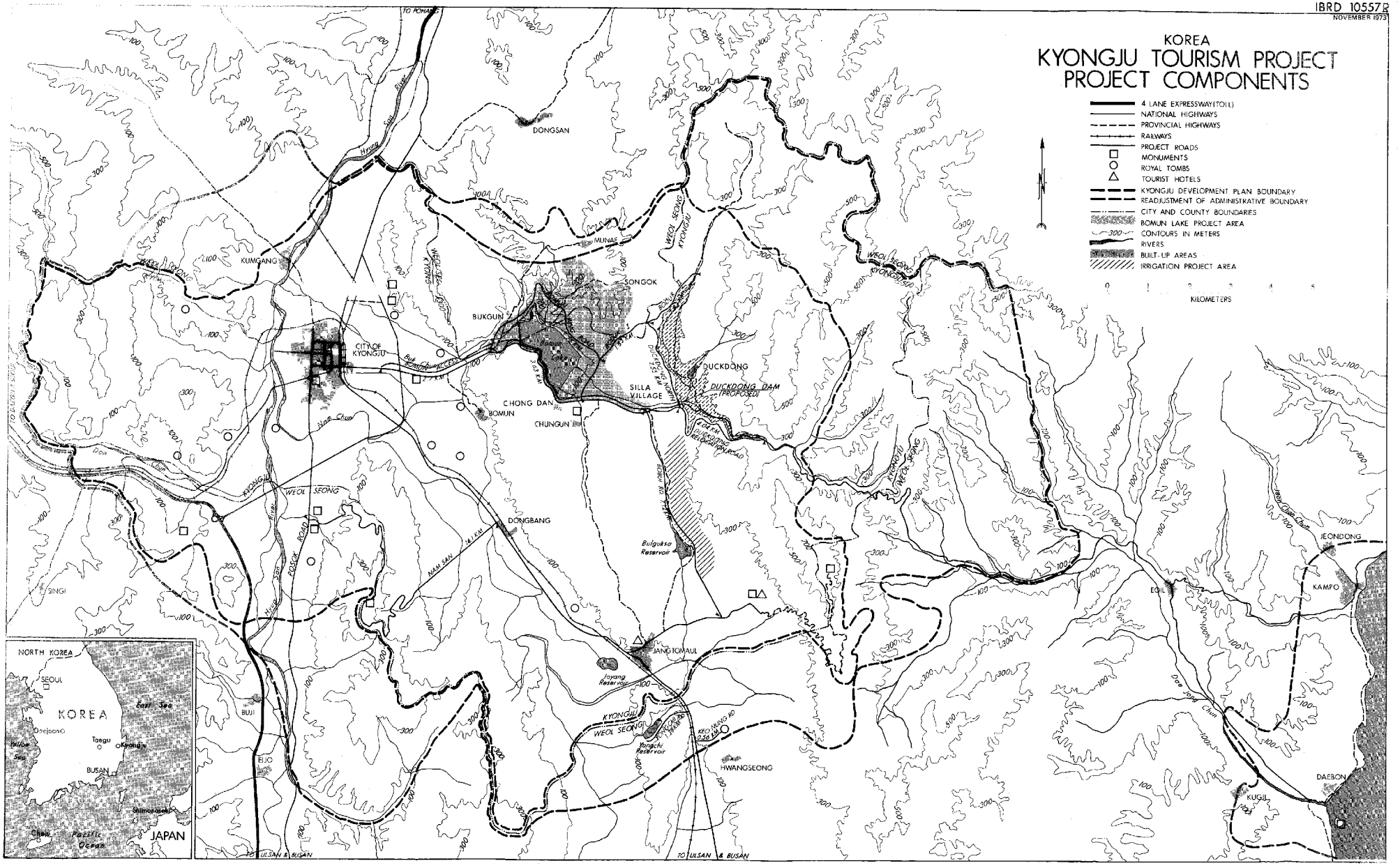
IBRD 10556
SEPTEMBER 1973





IBRD 10557R
NOVEMBER 1973

KOREA
KYONGJU TOURISM PROJECT
PROJECT COMPONENTS



IBRD 10558R
NOVEMBER 1973